

THE
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OF
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The Progress of Reconversion

I.

The broad picture of the progress of reconversion can be seen most clearly from the figures of the distribution by industry of the occupied man-power of Great Britain now published monthly by the Ministry of Labour. The figures for the most recent month, together with those for June, 1945, June, 1943, and June, 1939, (the only pre-war date for which comparable information is available) are given in Table I.

By the end of November, 1946, the demobilization of the armed forces and of those producing supplies for the forces was practically complete. The armed forces, civil defence, etc., were reduced from 5.2 million in June, 1945, to 1.60 million by the end of November, 1946, and even if the revised target figure of 1,473,000¹ for the end of the year, recently announced by the Prime Minister, is achieved, a net release² of only a further 125,000 can be expected during December. The target for employment on production of supplies for the armed forces is 500,000 by the end of December. Since this figure was already reached by the end of October, no further releases of labour can be expected from this source. Indeed, if the armed forces remain for long at the higher figure of 1,385,000 it may be necessary to re-expand employment on production for the forces, for it has only been possible to get down to the figure of 500,000 by supplying the forces in part from stocks remaining at the end of the Japanese war and from surplus supplies accumulated during the period when munitions production was being contracted to its new reduced level.

The man-power released by this demobilization—6.98 million since June, 1945—has been partly offset by a reduction of 1.33 million in the total occupied labour force. Nevertheless

¹ The actual figure announced by the Prime Minister was 1,385,000 for the armed forces alone. The figure of 1,473,000 assumes no change from the present figure of 88,000 for Civil Defence, National Fire Service and Police.

² The "net" release figure will be the difference between those demobilized and those called up during the period.

the total occupied labour force outside the armed forces and supplies category had risen by November, 1946, to a figure—18·25 million—slightly higher than that for June, 1939. The rate of decline in the total occupied labour force has been decreasing in recent months, but it continues and may offset the further net releases expected from the armed forces. The figure of 18·2 million for the total available labour force after meeting the requirements of the armed forces cannot, therefore, be expected to change appreciably.

Although the total labour force available after meeting Service requirements is much the same as pre-war,¹ its distribution between industries is substantially altered. The most important changes are :

- (i) Increased employment in National and Local Government Service. National Government Service expanded rapidly during the war and has shown no signs of contracting since the end of the war. Employment in Local Government Service hardly changed during the war but has expanded considerably during the last year. At the end of November the two together employed 2. million compared with 1·4 million in June, 1939.
- (ii) Employment in the metal, engineering, vehicle and chemical group of industries on production for the home civil market and export at the end of November was 69 per cent. greater than in June, 1939. This group of industries² covers Ferrous and Non-ferrous metals and manufacture ; Engineering ; Vehicles (including aircraft and shipbuilding) ; Electric cables, apparatus, etc. ; Scientific instruments ; Watches,

¹ In assessing the significance of this it should be remembered that (i) private domestic servants, men over 64 and women over 59 are excluded at both dates, and (ii) the total population of Great Britain has increased by over 1 million during the war.

² For ease of reference this group of industries will be referred to in the rest of the article as the "Investment" industries, and the manufacturing industries in the other group given in detail on page 3 as the "Consumption" industries. There are some consumers' goods produced by the first group and some investment goods by the second group, but as a broad method of description this division is not misleading.

clocks, plate, etc. ; General ironfounding, heating and ventilating apparatus ; Explosives, chemicals, etc. ; and Oil, greases, paints, etc. It is the group that was rapidly and substantially expanded during the war to meet the munitions needs of the forces and comprises the main industries, apart from building, producing capital equipment in peace-time. A large part of the expanded labour force has been retained and transferred to civil work both for the home market and export.

- (iii) The building industry which had been reduced by about one-half during the war has recovered to its pre-war level but was still short of the peak required for the building programme.
- (iv) Agriculture has a labour force 19 per cent. greater than in June, 1939. If the employment of prisoners-of-war were included the expansion would be considerably greater.
- (v) By contrast the consumer goods and services group¹ of industries (Textiles ; Clothing ; Leather ; Wood and paper ; Food, drink and tobacco ; Pottery, glass and building materials ; Distributive Trades ; Commerce and finance ; Professional and personal service ; and Entertainments, Catering, Laundries, etc.) were in October still substantially below the June, 1939, level—manufactures by 12·9 per cent. and services by 16·6 per cent., a reduction in total of 1·3 million.
- (vi) The number unemployed, including ex-H.M. Forces not yet in employment, was 559,000 less than in June, 1939.

Apart from the growth in the size of the Civil Service the outstanding feature of the progress of reconversion is the contrast between the expansion in the investment industries and the limited recovery of the consumption industries. The

¹ See note ¹ on page 2.

figures in Table I¹ are for employment for the home market and export together. Figures for the home market and export separately for these two broad groups of manufacturing industries are published by the Ministry of Labour and these are given in Table II,¹ for significant dates. The marked contrast between the investment and consumption industries applies both to employment for the home civil market and for export. Employment for the home market in the investment industries at 2.43 million in November, 1946, was 56 per cent. above June, 1939, while employment in the consumption industries at 2.32 million was 16 per cent. below June, 1939. Employment on export work was more than double pre-war in the investment industries but only just at the pre-war level in the consumption industries.

It is also significant that the changeover of the investment industries from munitions to civil work started well before the end of the war. Between June, 1943 and June, 1945, employment in this group on production for the home market increased by 174,000 and for export by 108,000. During the same period employment in the consumption industries for the home market showed no increase—in some of the individual industries in the group, *e.g.* textiles, there was actually a further fall—and employment for export increased by only 53,000. The investment industries thus had a substantial start in the reconversion race, and had already made many of the preliminary preparations for a rapid turnover to peace-time production when the end of the war came.

Although the total occupied labour force, after allowing for Service requirements, cannot be expected to increase appreciably from the figure of 18.2 million reached in November, there may be some reduction in the number unemployed over the next few months and consequently some increase in the total employed labour force. For the figure of unemployed as given in Table I includes ex-H.M. Forces who have not yet taken up employment. There were 345,000 in this category

¹ The figure in Table I relate to all categories of occupied—employed, employers, and those working on their own account—those in Table II only to “insured persons” employed and women working part-time.

in November and the number should fall as the rate of demobilization declines. But some further expansion is still needed in the building industry and in employment in manufacturing for exports. We have also yet to feel the effects of the raising of the school-leaving age to 15. It is clear, therefore, that no further expansion in employment in the consumption industries on work for the home market can be achieved except at the expense of some other category of employment. A reduction now in employment in Government service and the investment industries by 8 per cent.—this would still leave them both substantially higher than pre-war—would release sufficient labour to bring the consumption industries up to their pre-war level.

The expansion in the investment industries on work for the home market and export is so outstanding a feature of reconversion that it would be of great interest to examine in detail what has happened in each of the industries in this group. Unfortunately, it is not possible to do this, for the Ministry of Labour publishes figures on employment for the Services, for the Home Market and Export only for the group as a whole. This is a serious gap in the present man-power statistics and is particularly surprising in view of the much greater detail in which the information is available for the consumption industries. But the net effect of the reduction in employment on work for the armed forces, and the increase in employment for the home market and export can be seen from the figures of employment by industries now published monthly. These figures for the most important manufacturing industries in the investment and consumption group for June, 1939, June, 1945, and November, 1946, are given in Table III. Notwithstanding the reduction by 700,000 compared with June, 1939, in the number employed in the investment industries on production for the forces, every industry in the group which had expanded during the war remained at a much higher level than pre-war in November, 1946. The most striking increases are in Shipbuilding (52 per cent. increase compared with June, 1939), Electric cables and apparatus (36 per cent. increase), General engineering (34 per

cent.), Constructional engineering (36 per cent.) and Marine engineering (35 per cent.). Until the middle of 1946 the expansion of employment for the home market and exports in these industries, was being more than offset by the contraction in employment for the Services but since then there has been a net expansion month by month. The only two industries in this group; Tinsplate and General ironfounding, which lost labour during the war, were still substantially below the June, 1939, level in November, 1946. With few exceptions, the industries in the consumption group fall well short of their pre-war labour force.

II.

What is being made by the increased labour force in the investment industries? It is not possible from the published information to give a satisfactory answer to this question. An ever expanding and even embarrassing flood of statistics is being published by the Board of Trade on supplies of consumer goods for the Home Market, and information is available in detail for exports. But only a few figures are published on the production of investment goods, and fewer still with comparable pre-war figures. The figures for supplies of consumer goods where there is a pre-war basis of comparison are given in Table IV, the few figures for the production of investment goods in Table V, and in Table VI indices of the volume of exports are given recalculated in groups to correspond as far as possible with those used by the Ministry of Labour in their employment statistics.

The most conspicuous feature of the supplies of consumer goods for the home market is the difference in trend between the goods produced by the Metal and Electrical engineering industries and those produced by the consumption industries. The index number of hardware supplies was as high as pre-war by May-June, 1946, while the indices for Outer clothing, Footwear, Furniture and furnishings were still substantially below the pre-war level. In the detailed items, electric irons, fires, kettles, radiators, and domestic holloware were being supplied even as early as April-June, 1946, at rates well in

excess, in some cases more than double pre-war, while footwear, clothing, blankets, cutlery, linoleum, carpets continue to be supplied at a very low rate compared with pre-war. All the items which have increased substantially are made by the investment group of industries which have retained so much of their war-time expanded labour force. It is clear, therefore, that this expansion has not yet taken place solely to meet the demands for capital goods needed to re-equip industry to replace the capital losses of the war.

The expansion in the production of investment goods for which figures are available has already achieved substantial proportions. Commercial vehicles, shipbuilding, agricultural machinery and machine tool production was well in excess of the pre-war level by the end of the year. The latest figures for locomotives, railway wagons, textile machinery and pumps and priming plant are for the middle of 1946 but even by then production was either up to or greater than pre-war.

In the export trade also expansion has been predominantly in the investment industries. The volume of exports of metal goods, engineering manufactures and vehicles, was 37 per cent. above 1938, in the third quarter of 1946, exports of chemicals, etc., 47 per cent. above 1938, while exports of textiles were 34 per cent. below. There has been some expansion in clothing exports (77 per cent. increase) and in pottery, abrasives, and glass (18 per cent. increase) but these are still relatively unimportant items in the export trade as a whole. The expansion in investment goods exports has not been spread evenly over all markets, but has been highly concentrated on Europe, particularly on exports to France, Holland, Belgium and Denmark, countries which themselves are engaged on substantial programmes of capital reconstruction. Exports to Europe (excluding Germany and Russia) as a percentage of exports to all countries, increased from 11 per cent. in 1938 to 28 per cent. in 1946 in the case of iron and steel manufactures, from 18 per cent. to 23 per cent. in the case of machinery, from 14 per cent. to 26 per cent. in the case of electrical goods and apparatus and from 20 per cent. to 32 per cent. in the case of vehicles.

III.

The most conspicuous feature of the process of reconversion revealed by all these figures is the expansion in production in the investment group of industries to meet not only the demand for equipment to make good capital losses during the war both in this country and overseas but also to meet the demand for those consumers' durable goods produced by this group of industries. Is there any evidence that the emphasis on expansion in these industries at the expense of such consumer goods industries as textiles, clothing, furniture, etc., has been consciously planned and guided by the Government?

Firstly, it is doubtful whether a conscious decision has been taken as to the allocation of resources between consumption and investment. The expansion of the Engineering, metal and vehicle group of industries cannot have taken place solely because the planning authorities have thought that we must sacrifice consumers' goods now in order to undertake the task of re-equipping British industries and making good our war-time capital losses. For we have seen that these industries have been allowed to produce consumers goods, particularly electrical appliances and aluminium holloware at a rate well in excess of pre-war. It is possible, of course, that the planners at the Board of Trade have decided that the public would rather have increased supplies of these¹ than a little more clothing, footwear and furniture. But it hardly shows scientific overall planning or consideration for the consumer for the Board of Trade to have taken this decision and then for the Ministry of Fuel and Power to persuade or force the consumer not to use these electrical appliances.

Secondly, it is now apparent that the expansion in the investment industries and contraction in the consumption has not been "co-ordinated" with available supplies of raw materials. The expanded metal, engineering and vehicle industries are already experiencing a shortage of raw materials, particularly of steel. On the other hand there are ample raw material

¹ One would indeed be justified in drawing this conclusion from the pride with which Ministers usually quote these as examples of the success of reconversion.

supplies for some of those industries, particularly wool and cotton, where production is so low that, even with a reduced export trade, home consumption continues to be far short of the pre-war level. As the Board of Trade have themselves so clearly put it "on balance the present distribution of the labour force in this country accentuates shortages of raw materials and semi-finished products, and a nearer approach to the pre-war pattern would ease the position."¹ An overall plan which secures that there is labour short of materials in one group of industries and materials short of labour in another can hardly be dignified with the adjective scientific.

Thirdly, there is no evidence that labour has been distributed between the different industries in the investment group itself on any planned basis. Employment in General ironfounding, heating and ventilating, whose products are so urgently needed for the building programme, was still in November, 1946, 12 per cent. below the June, 1939, level. Machine tool output on the other hand was 60 per cent. above the 1935 level in the year ending July, 1946, notwithstanding the enormously increased supplies of machine tools made available during the war not only from British production but also from Lend-lease supplies, most of which we have retained.

Fourthly, it is now becoming clear that Ministers are not happy about the direction of British exports. Suggestions have been made recently that we are exporting too much to soft currency areas and too little to hard currency areas. But this results in part from the expansion in the investment industries, the consequent concentration in the export drive on the products of these industries, and the great difficulty in increasing exports of the products of those industries, particularly textiles, whose overall size has been so substantially contracted. We have seen that a large part of the expansion in exports of metal goods, electrical goods, machinery and vehicles has been to European countries. The hard currency countries are Sweden, Argentina, the United States and Canada. It may be possible to persuade exporters to send more of these

¹ "An Analysis of the Raw Materials Position." Board of Trade Journal, November 23rd, 1946. p. 1654.

goods to Sweden and Argentina but it would be foolish to expect them to be able to direct an increased part of their exports of machinery and vehicles to the United States and Canada. If we want a larger proportion of our exports to go to these two countries, then we must change the character as well as the direction of our exports. One of the most promising markets in these two countries is for high grade textiles, and probably the easiest way to earn increased dollars would be through an expansion in exports of these. But this cannot take place to any substantial extent unless the textile industries' overall employment is increased and this can now only occur at the expense of other industries.

Lastly, it appears doubtful whether the Government has possessed in the last eighteen months sufficiently accurate information about the actual distribution of the man-power of the country at any one time to enable it to decide its future allocation between alternative uses in the future with any precision. It would be extremely difficult to decide, for example, what part of the labour force to be released by the Services should go to textiles as compared with distribution and services unless, at the time the decision was being taken, reasonably accurate information was available of the actual labour force absorbed by these two industries. The figures of actual labour distribution compiled month by month by the Ministry of Labour are based on estimates and the information made available by the July count of the insured population has shown that the earlier estimates for one or two important categories of employment were substantially wrong. This error was greatest in the two categories "Local Government Service" and "Commerce and finance, Professional service, etc." The figures for August are available on two bases, first the estimate made before the July count of insured was available and second after this count. The revised estimates for the two above categories were 1,004,000 and 1,923,000, compared with earlier figures of 875,000 and 1,681,000. In what sense of the word can the level of employment in these two industries have been planned? Certainly it is difficult to see how the

planners could have considered the relative merits of employing the "additional" 360,000 in these two rather than in other occupations.

But even if there is an overall plan it is already evident that the Government have neither the power nor the capacity to ensure that events shape themselves according to the plan. The President of the Board of Trade has stated recently that the man-power budget is the principle instrument of overall-planning. The choice of this instrument seems to be based on the assumption that the man-power budget was the most important and efficient means of securing the co-ordination of economic policy in war-time and that since it was so successful then, it should be used for the same purpose in the post-war period. It is my view that this is based on a misapprehension of the function and importance of the man-power budget during the war but the justification and explanation of this view would need another article in itself. There is, however, an essential difference between the position in war and peace which in any case makes the man-power budget in peace time of relatively little value as an instrument for overall planning. During the war a large part of the labour force of the country was working directly or indirectly on contract for the Government either in the armed forces or in munitions production. A decision to increase or decrease the size of the armed forces could be made effective now as it was during the war either by calling up more men or releasing more. But a decision, for example, to allocate more labour to aircraft production and less to munitions production for the army was not rendered effective during the war by the Minister of Labour withdrawing labour from Ministry of Supply factories and directing it to those of the Ministry of Aircraft Production. The reallocation of labour only became effective if the Ministry of Supply cut its munitions contracts to the extent which it thought was necessary to release that volume of labour which the Government had decided it should give up. Similarly the release of labour from civilian industry was most effectively secured by ensuring the reduction in the volume of production in those industries by such means as the limitation of the supply

of raw materials, limitation of supplies orders and concentration. Direction of labour and differential wage rates were merely supplementary methods of achieving the desired redistribution. It follows that far too much emphasis is laid in current economic discussion on the necessity for a national wages policy to secure the desired reallocation of labour. The raising of wages for example in the textile industries would only act slowly and over a long period of time in attracting additional labour, unless action is taken at the same time to force the release of labour from those industries from which the additional labour is to be attracted. This can only be done by reducing the volume of orders accepted by the industries concerned either directly, or indirectly by curtailing their supplies of raw materials. It is these devices rather than the man-power budget which would then become the crucial planning instruments, and without them the man-power budget is nothing more than a wish-plan !

IV.

This raises the question whether any redistribution of the labour force from the pattern reached after eighteen months of reconversion is in fact desirable. We have already seen that the present distribution has resulted in the consumer being supplied with a more than ample flow of some commodities, particularly electrical appliances, while he remains short of others such as clothing and furniture, which he would undoubtedly prefer ; that it is not related to available supplies of raw materials ; and that it results in our concentrating on exports of goods which are not likely to earn us dollars. All these distortions would be at least partially remedied by the transfer of some labour from the investment to the consumption industries, especially textiles. But the question raises much wider and more serious issues. Firstly, does the present allocation of resources in this country in any way accord with the preferences of consumers for some increase in their standard of consumption now compared with the possibility of a still greater increase later, and secondly, is the present distribution of resources such as we can hope to maintain over a considerable

period of time without running the risk of substantial unemployment?

Governments, and especially governments under the influence of planning doctrine, always seem to attach overwhelming importance to raising the standard of consumption in the future but little to raising that standard in the present. A diversion of economic resources in the present to build capital equipment is assumed as axiomatically justified by the fact that it will result in a higher standard of consumption in the future than would otherwise have been possible. But the increased standard in the future is seldom weighed with the correct rate of discount against the higher standard of consumption in the present which has been foregone. The fact is that the most crucial economic decision in this country in the period of reconversion—what part of our resources should be used to raise our depressed standard of consumption, and what part to make good our capital losses—is almost completely ignored, and is certainly not adequately explained to the public as the central issue of economic policy. So we find ourselves in the curious position that at a time when we are devoting a large part of our resources to non-economic uses in deciding to have a large army and Civil Service and to give every one increased educational facilities, and when we are committed to a large scale housing programme, we have also decided, consciously or not, that we should engage on a large scale capital investment programme to re-equip industry. A visitor to our economy would surely be justified if he deduced from our decision to do all this that we must be rich indeed, and that our present standard of consumption must be so high that we attach relatively little importance to an improvement in it now.

The industries which have expanded so rapidly during the last eighteen months on production both for the home market and export are notoriously subject to cyclical fluctuation. Has this been kept in mind in allowing them to expand and have the Government decided that the risks of unemployment involved in this expansion must be taken? For there can be little doubt that there are such risks. Clearly the more these

industries are expanded and the faster they meet the demands for re-equipment, not only in this country but in the countries of Western Europe which are also trying to make good the capital losses suffered during the war, the more serious will be the problem of readjustment once the process of re-equipment is completed.¹ The issue can be most clearly exemplified from the position of the shipbuilding industry. At the end of December, 1946, the tonnage of merchant shipbuilding under construction was 1.76 million compared with 1.00 million in June, 1939, and the number employed in the industry was 219,800 compared with 144,700 in June, 1939. The level of shipbuilding construction and employment is now higher than at any time since the early twenties. Have the risks of unemployment involved in this expansion been weighed against the advantages of the alternative policy of making good our shipping losses at a rate slower, and so facing a less serious problem of readjustment later? This latter policy would of course also enable us to have rather more labour in the consumption goods industries now. The Government are, however, apparently so sure of having mastered the technique of overall planning that they are confident of being able to deal with this situation when it arises. The Lord President stated recently that the Government "will have soon a long list of projects . . . all blueprinted and prepared, waiting for investment and manpower resources to be made available to carry them out."² If this means that when the present expanded investment industries have met all re-equipment needs and the danger of unemployment in these industries arises, the Government will then step in with these projects to maintain the level of employment in those industries, the outlook for the consumer is indeed a sorry one for he can look forward to many more years of shortages of clothes, furniture, etc., together with a plentiful supply of anything made by the metal, engineering and vehicles industries.

¹ It is of interest to note in this connection that the French Economic Plan allows for imports of capital goods as follows (milliard of francs) :

1946	1947	1948	1949	1950
42	91	71	36	12

² Lecture to Institute of Public Administration, October, 1946.

Now although there are grounds for believing that the course of reconversion has not been scientifically planned, there can be little doubt that Government action has had a great influence in many directions and has probably exaggerated the expansion in the investment industries. All Government economic thinking, or at least all which is publicly divulged, is dominated by the view that we are in a position of overall man-power shortage. This arises from the fact that in our present economic position all our resources are employed and yet all manufacturers think that they could profitably sell additional output if they could only obtain further resources. Every industry, therefore, clamours for more labour. Now this situation can only arise if there is an underlying inflationary tendency in the economy and if the community is trying to save less than is necessary to cover investment and the budget deficit. And the remedy for it is to reduce investment or Government spending or increase taxation. But this apparently is not the conclusion which the Government draws. Their argument seems to proceed as follows : since there is an overall man-power shortage we can only get more production out of the same man-power if we have a greater amount of capital equipment per man, and the remedy for the overall man-power shortage, therefore, is an increase in capital investment. So arises what amounts almost to a mania for re-equipment, for its justification is no longer based on the reduction in costs in the industries concerned, but on general national grounds of limited man-power resources. If the problem is looked at from the point of view of a single industry, say cotton, it appears to be fairly clear that the only way of increasing production is to have more mechanisation, and the effects on the present size of the labour force in cotton industry of the consequential expansion in the textile machinery industries can perhaps be ignored. But when the same line of reasoning is followed in all industries, not only in cotton, but coal, iron and steel, wool, pottery, electricity, furniture, etc., then it must inevitably result in a substantial further expansion in the investment industries and make the man-power shortages in the consumption goods even more acute in

the immediate future. This line of reasoning also leads to the anomaly that in a period of shortage of capital equipment we so arrange the distribution of labour that we cannot use even the limited capital resources we possess. For the expansion of the investment industries and undermanning of the textile industries results in capital equipment in those industries lying idle.

A similar illogicality underlies the recommendations which most of the working parties have made for increased mechanisation. They start from the view that full employment will of itself guarantee a higher standard of consumption than pre-war, the effects of a larger army and Civil Service, the raising of the school-leaving age and the reduction of working hours being completely ignored. Thus the Furniture Working Party believe "that the industry can look forward to a steady rather than a sudden expansion of business in step with gradually rising standards of living resulting from a full employment policy,"¹ and estimate the level of furniture consumption to be 25 per cent. higher than 1937 by 1950. The Pottery Working Party arrive at the conclusion that "the greater purchasing power of the general public caused by the redistribution of the national income and the policy of full employment should swell the expenditure on crockery,"² and estimate the level of home sales of crockery at 1935 prices at £7.0 million a year in the post-war period compared with £5.5 million in 1935. The Hosiery Working Party make similar assumptions about increasing demand for hosiery "taking into account the present anticipated higher level of purchasing power." The Cotton Working Party do not take quite so rosy a view, estimating an increase in consumption of cotton goods of only 5-10 per cent. compared with pre-war, but they also state that "a successful full employment policy should mean a greater demand for consumer goods."³ But all these working parties see the impossibility of meeting these increased demands in the near future with the labour force likely to be available and so they

¹ Furniture Working Party, p. 78.

² Pottery Working Party, p. 8.

³ Cotton Working Party, p. 117.

all look favourably on increased mechanisation. It does not appear to occur to any of the Working Parties that an increased supply of machinery in the next year or two can only be obtained by still further expansion in the investment industries which will in turn inevitably result in a contraction in the present reduced labour force in the consumption industries.

Government financial policy of maintaining a low rate of interest at all costs and of subsidising re-equipment in some industries act as further factors making for an expansion in the investment goods industries. At the same time the consumer is prevented from making his preferences felt by the continuation of rationing and price control in the consumption industries.

Because we have succeeded during the period of reconversion in preventing inflationary price increases we have assumed that the underlying distortion of the economy which takes place during a period of inflation has also been avoided. We refuse to recognise an investment boom when we are in it by describing it in terms of its symptoms of an overall manpower shortage. We regard the period of reconversion as a special phase in our economic history which will pass as the flow of goods increases, and neglect to pay attention to the fact that what is done during this period may effect our capacity to maintain full employment later. We are so hypnotised by the prospect that the next slump will originate in the United States,¹ that we neglect altogether to ensure that no distortions arise in our own economy.

¹ We are so certain of it, that it is now generally referred to as "the American slump."

ELY DEVONS.

DISTRIBUTION OF TOTAL MAN-POWER
IN GREAT BRITAIN ¹

TABLE I

Thousands

	1939 June	1943 June	1945 June	1946 November
Total Working Population ...	19,750	22,281	21,649	20,324
Forces, Civil Defence, National Fire Service and Police ...	560	5,080	5,217	1,598
Manufacture of supplies for the Forces ...	1,270	5,121	3,830	474
National Government Service ...	539	986	994	1,007
Local Government Service ...	846	800	909	1,025
Agriculture ...	910	1,032	1,025	1,082
Mining and Quarrying ...	873	818	799	801
Building and Civil Engineering ...	1,310	726	722	1,250
Gas, Water and Electricity ...	242	200	196	257
Shipping and Transport ...	1,273	1,191	1,268	1,375
Metal goods and manufacture, Engineering, Vehicles, Shipbuilding, Chemicals and Explosives, for the Home Civil Market and Export ...	2,036	923	1,214	3,435
Other Manufacture ² for Home Civil Market and Export ...	3,509	1,702	1,776	3,055
Distribution, Commerce, Finance, Entertainment and other Services	5,112	3,622	3,556	4,264
Unemployed ³ ...	1,270	80	143	711

Source :—Ministry of Labour Gazette.

¹ Excluding private indoor domestic servants, men over 64 and women over 59.

² Textiles ; Clothing ; Leather ; Wood and Paper ; Food, Drink and Tobacco ; Building Materials ; and Miscellaneous Manufacturing.

³ Including ex-members of H.M. Forces who had not yet taken up employment.

TABLE II
NUMBERS EMPLOYED¹ IN MANUFACTURING INDUSTRY ON PRODUCTION FOR THE
HOME CIVILIAN MARKET AND EXPORT
GREAT BRITAIN

	Metal Goods and Manufacture, Engineering, Vehicles and Ship-building	Chemicals, Explosives, Paints, Oils, etc.	Other Manufacturing Industries						Thousands
			Total	Textiles	Clothing	Leather, Wood and Paper	Food, Drink and Tobacco	Rubber, Oilcloth, Linoleum, Brushes and Brooms, Musical Instruments, and Miscellaneous Manufacturing	Building Materials, Pottery and Glass
				Civilian	Home Market				
1939 June ...	...	1,535	2,766	...	...	...	...	...	...
1943 June ...	673	147	1,415	296	313	281	404	45	76
1945 June ...	846	148	1,435	284	313	302	389	50	97
December ...	1,571	176	1,698	368	329	383	424	83	111
1946 June ...	1,993	220	2,081	433	403	501	462	115	167
August ...	2,106	237	2,230	460	427	537	479	122	178
September ...	2,130	239	2,243	469	440	545	482	126	181
October ...	2,164	245	2,290	477	454	552	496	132	179
November ...	2,184	248	2,320	486	458	560	502	134	180
1939 June ...	435	...	495	...	Export	...	...	...	...
1943 June ...	69	19	151	87	5	27	12	6	14
1945 June ...	170	26	204	111	9	36	17	9	22
December ...	510	44	303	136	13	66	21	33	34
1946 June ...	780	65	443	196	28	104	19	53	43
August ...	795	65	473	211	31	108	21	57	45
September ...	827	66	491	224	32	109	21	59	46
October ...	836	65	495	222	33	111	19	60	50
November ...	847	64	505	226	35	113	19	62	50

Source :—Monthly Statistical Digest and Ministry of Labour Gazette.
¹ Insured workers and part-time female workers (two part-timers counted as one unit).

INSURED EMPLOYMENT
IN
MAIN MANUFACTURING INDUSTRIES
IN GREAT BRITAIN

TABLE III

Thousands

	1939 June	1945 June	1946 November	Percentage increase (+) or decrease (—) November, 1946 compared with June, 1939
Pig iron, steel melting, etc.	175.5	190.7	193.3	+ 10.1
Non-ferrous metals manu- facture	55.9	84.0	87.8	+ 57.1
Tin plate manufacture ...	25.1	12.4	13.8	— 45.0
Iron and steel tube, wire, etc.	58.5	64.6	64.8	+ 10.8
General engineering ...	704.7	1,139.8	944.3	+ 34.0
Marine engineering ...	52.2	80.5	70.2	+ 34.5
Electrical engineering ...	133.9	175.8	160.1	+ 19.6
Constructional engineering	49.0	41.9	66.5	+ 35.7
Motor vehicles, cycles and aircraft	473.3	876.2	562.3	+ 18.8
Shipbuilding and repairing	144.7	252.3	219.8	+ 51.9
Railway and other carriages and wagons	65.6	61.2	79.2	+ 20.7
Bolts, nuts, screws, tools, cutlery, brass and mis- cellaneous metal goods	378.1	405.7	431.4	+ 14.1
Electric cables, apparatus, etc.	195.9	279.9	265.5	+ 35.5
Scientific instruments ...	48.3	76.8	65.0	+ 34.6
General ironfounding, heat- ing and ventilating apparatus	117.3	72.2	103.5	— 11.8
Explosives, chemicals, etc.	174.3	338.9	235.5	+ 35.1
Oils, greases, paints, etc....	110.1	99.2	110.5	+ .4
Leather and leather goods	73.0	51.6	65.5	— 10.3
Sawmilling and wood- working	101.6	124.9	126.9	+ 24.9
Furniture, upholstery, etc.	138.4	62.4	113.4	— 18.1
Paper and paper board- making	69.8	48.7	63.2	— 9.5
Cardboard box, stationery and other paper goods...	82.3	49.5	58.2	— 29.3
Printing, publishing, book- binding	304.3	173.4	250.3	— 17.7

Continued on page 21

TABLE III—Continued

	1939 June	1945 June	1946 November	Percentage increase (+) or decrease (—) November, 1946 compared with June, 1939
Cotton spinning	184.9	113.6	140.5	— 24.0
Cotton weaving	155.0	99.3	111.0	— 28.4
Woolen and worsted industry	207.6	129.8	159.7	— 23.1
Silk, rayon, nylon, etc. ...	72.2	45.9	59.5	— 17.6
Hosiery	126.4	62.7	79.4	— 37.2
Textile finishing	79.6	52.2	62.2	— 21.9
Other textiles	162.2	115.7	125.5	— 22.6
Tailoring	234.6	172.2	207.0	— 11.8
Shirts, collars, blouses, etc.	93.5	52.5	63.1	— 32.5
Boots and shoes	135.0	95.3	115.4	— 14.5
Other clothing	168.0	82.8	116.5	— 30.7
Cement manufacture, etc.	48.1	34.4	54.7	+ 13.7
Bricks, tiles, pipes, etc. ...	96.4	34.3	66.7	— 30.8
Pottery, china, etc.	67.0	39.0	59.1	— 11.8
Glass and glass bottles ...	48.2	45.8	56.4	+ 17.0
Grain milling	32.1	30.3	32.2	+ .3
Bread, biscuits, etc.	180.7	137.3	151.2	— 16.3
Drink industries	120.9	109.1	119.9	— .8
Tobacco, cigars and cigarettes	42.3	45.5	46.1	+ 9.0
Oilcloth, linoleum, etc. ...	13.3	6.3	8.5	— 36.1
Brushes and brooms	12.3	10.8	15.3	+ 24.4

Source :—Monthly Statistical Digest.

SUPPLIES OF CONSUMER GOODS
FOR
CIVILIAN HOME MARKET

Index Number of Total Supplies
1945 = 100·0

TABLE IV

	Outer Clothing	Footwear	Furniture and Furnishings	Hardware
1935 (only roughly comparable)	200	175	350	200
1945 May—June	96	102	90	91
1946 May—June	129	132	213	196
Sept.—Oct.	146	145	215 ¹	192 ¹

¹ July—August.

Individual Items
(Where pre-war comparison available)
Annual Rate

	Unit	Pre-War		1946	
Footwear					
Non-Rubber	Million Pairs	1935	129	Sept.—Nov.	117
Rubber boots	Million Pairs	1935	3·4	Sept.—Nov.	4·6
Plimsols, etc.	Million Pairs	1935	26·8	Sept.—Nov.	10·3
Clothing and Textiles					
Men's socks	Million Pairs	1937	90	Sept. Oct.	58·3
Women's stockings	Million Pairs	1937	280	Sept.—Oct.	165·0
Girls', boys' and children's socks	Million Pairs	1937	90	Sept.—Oct.	84·0
Gloves	Million Pairs	1935	44	July—September	22·8
Corsets and Brassieres	Million Pairs	1935	28	Oct.—Nov.	22·2
Wool blankets	Millions	1935	6·5	Sept.—Nov.	5·8
Household Goods					
Knives	Millions	1935	24	July—September	9·2
Spoons and forks	Millions	1935	56	July—September	15·8
Mattresses	Millions	1935	2·5	July—September	2·4
Linoleum	Million Sq. Yds.	1935	57	Sept.—Nov.	19·0
Coir mats and matting	Million Sq. Yds.	1935	11	Sept.—Nov.	9·5
Carpets	Million Sq. Yds.	1935	34	June—August	14·4
Electric cookers	Thousands	1937	250	July—September	289
Electric Radiators, fires, etc.	Thousand	1937	1,250	July—September	2,622
Electric kettles	Thousand	1937	350	July—September	496
Electric irons	Thousand	1937	1,250	July—September	2,315
Electric vacuum cleaners...	Thousand	1937	400	July—September	476
Brooms and brushes	Millions	1935	60	July—September	48
Domestic holloware	£ million	1935	4·5	May—July	15·4
¹ Electric lamps	Millions	1935	88	May—June	162

TABLE IV—Continued
Annual Rate

	Unit	Pre-War	1946
Other Goods			
Radio sets	Thousand	1935 1,900	October 1,362
Private cars ¹	Units	1935 295,000	November 165,400
Mechanical clocks	Thousand	1935 4,800	July—September 1,163
Electrical clocks	Thousand	1935 110	July—September 1,100
Safety razor holders	Millions	1935 1.8	July—September 4.6
Prams and push chairs	Thousand	1935 590	November 1,089
Pedal cycles	Thousand	1935 1,700	July—September 971
Fountain pens and pro- pelling pencils	Millions	1935 15	August—October 4.3
Other pencils	Millions	1935 150	August—October 136
Combs	Millions	1935 50	August—October 89
Travel goods	Thousands	1935 8,500	May—July 1,896
Handbags	Thousands	1935 10,000	May—July 3,552
Umbrellas	Thousands	1935 4,500	April—July 801
Mechanical lighters	Million	1935 1.45	Sept.—Nov. 6.5

Source :—Board of Trade Journal and Monthly Statistical Digest.

¹ Production for the Home Market.

PRODUCTION OF CAPITAL GOODS

TABLE V

Monthly Average

				Unit	Pre-War		Present Rate	
Commercial Vehicles								
Home Market	...	...	Units		1935	6,526	Oct.—Dec. 1946	9,382
Export	...	...	Units		1935	1,136	Oct.—Dec. 1946	4,422
Machine Tools	...	...	Index of Volume of Output		1935	100·0	Year ending July 1946	160
Locomotives								
Home Market	...	...	£ million		1935	125	June—July 1946	127
Export	...	...	£ million		1935	124	June—July 1946	532
Railway Wagons								
Home Market	...	...	Units		1935	317	June—July 1946	866
Export	...	...	Units		1935	1,292	June—July 1946	347
Textile Machinery								
Home Market	...	...	£000		1935	450	2nd qr. 1946	1,072
Export	...	...	£000		1935	576	2nd qr. 1946	1,009
Pumps and Priming Plant								
Home Market	...	...	£000		1935	127	August 1946	505
Export	...	...	£000		1935	71	August 1946	226
Agricultural Machinery								
Agricultural Tractors	...	...	Number		1937	1,496	3rd qr. 1946	2,124
Tractor Drawn Mouldboard Ploughs	...	...	Number		1937	504	3rd qr. 1946	1,446
Disc Harrows	...	...	Number		1937	110	3rd qr. 1946	955
Mowers	...	...	Number		1937	370	3rd qr. 1946	671
Threshing Machines	...	...	Number		1937	43	3rd qr. 1946	94
Merchant Shipbuilding under Construction				Million Gross Tons	End of 1939	1·00	End of December 1946	1·76

Source :—Monthly Statistical Digest and Board of Trade Journal.

VOLUME OF EXPORTS OF UNITED KINGDOM
PRODUCE

Quarterly Average, 1938 = 100·0

TABLE VI

	1945 Quarterly Average	1946 3rd Quarter
Total	46	104
Metal goods, engineering and vehicles...	41	137
Iron and steel manufactures	33	113
Non-ferrous metals and manufactures...	61	204
Cutlery, hardware, implements and instruments	68	172
Electrical goods and apparatus	62	172
Machinery	49	114
Vehicles (including locomotives, ships and aircraft)	23	154
Chemicals, explosives, paints, oils, etc.	90	147
Chemicals, drugs, dyes	104	163
Oils, fats and resins and manufactures thereof	29	83
Textiles...	41	66
Cotton yarns and manufactures	34	42
Woollen yarns and manufactures	39	77
Silk and artificial silk yarns and manu- factures	114	153
Manufactures of other textile materials	26	81
Clothing	57	177
Apparel	62	182
Footwear	34	158
Leather and paper	28	93
Leather	24	78
Paper and cardboard	33	108
Manufactures of wood and timber	18	53
Pottery, abrasives, glass, etc.	76	152
Miscellaneous goods wholly or mainly manufactured ¹	36	118
Food, drink and tobacco	85	98
Raw materials and articles mainly manufactured	12	26

¹ Including Rubber manufactures but excluding Coke and Manufactured Fuel.

*Cotton's War Effort

INTRODUCTION.

An apology is due to the Society and to the cotton industry for the title of this paper. It would be impossible to do justice to the subject in such a paper as this. A large book would be needed. I can only present a very rough line sketch, not a half-tone print.

The paper contains little that is not already known to many members of the Society and much of the remainder may appear to them distorted. The philosopher seeking reality must ever be content with certain aspects of it only. The observer can only observe from his own point of view and my observatory is the Cotton Control. That is the reason why at times the paper may appear to be a history of the Control rather than of the industry. For the same reason I have little to say about the finishing section, not because of any lack of appreciation of its importance in the war but because the Control has had little to do with it.

I must touch on some matters which have been or are the subject of keen controversy and even of political antagonism. I shall try to avoid any controversial aspects but may not altogether succeed.

In dealing with such a wide subject it is not easy to decide on the best method of treatment. A purely chronological description of events might have life and movement but it would make it difficult to see the relationships of the parts. Sectionalising the subject conceals some of the drama but permits of statistical treatment, and I shall follow this course.

Fortunately, the magnitude of the industry's contribution towards winning the war is not easy to hide. The majesty of the heavens was not abolished when Einstein expressed the music of the spheres in a mathematical formula. I hope my own symbols, though less elegant, will be easier to follow.

* This paper was read before the Manchester Statistical Society on 13th November, 1946.

RAW MATERIAL SUPPLIES

I start then with the industry's raw materials, meaning by that, raw cotton and cotton waste. My colleague, Dr. Hubball will be dealing in a later paper with the many other commodities without which a cotton mill cannot run. At the outbreak of war, stocks of cotton in this country represented less than six month's consumption and were not too well balanced. They would have been better if 600,000 bales of American cotton which had been acquired by the Government in exchange for rubber some months earlier had already been shipped. In fact, none had arrived when war broke out. Owing to the export subsidy on American cotton the total amount of Barter cotton eventually received was nearer 700,000 bales. One of the earliest tasks of the Control was to find storage space for this cotton. It was housed mainly in derelict cotton mills—tragedies of the past turned to good account in the hour of the country's need. The Barter cotton was well graded. It was all examined by raw cotton merchants on arrival and was found well up to sample. During 1940, much of it was sold to the trade through merchants. This was done partly to check abrupt increases in price. The cotton market suffered under increasing strain during that year. It was at first supposed that the futures markets could not work properly except with a free flow of cotton but as the world plunged deeper into the war the Raw Cotton Associations made valiant efforts by one expedient after another to adapt the market to increasingly stringent restrictions here and capricious behaviour of the markets abroad. Shipping was the main cause of limitation and imports were made subject to licence. In these circumstances the market developed instability. If cotton could have been brought freely from Alexandria the price there would no doubt have been higher. It would certainly have been lower here. Table 1 shows how much more sharply Egyptian cotton rose in price than American. Limits were imposed on the daily movements of futures and for short periods the market was closed. A new form of contract was introduced which removed the obligation on the seller to tender

cotton and enabled him to extend the contract at a calculated price based on the spot price in the country of origin. By these devices a number of financial disasters were narrowly avoided but the futures markets were gradually losing their meaning and becoming increasingly divorced from spot prices. It was finally decided to end the struggle and close the markets in March, 1941.

At that date all cotton in or arriving at this country was requisitioned. A company, Cotton Importers and Distributors Ltd., was set up by the Liverpool and Manchester Cotton Associations to import and distribute cotton on behalf of the Cotton Control, in return for an annual payment of £500,000. The experiment was not a success and lasted only a year. If I went too far into causes I should be getting on to that controversial ground which I wish to avoid. The conditions during that year were most difficult. The submarine campaign was waxing. The Italian fleet was ranged against us. The French seaboard was under enemy control and our western ports were carrying a burden for which they had never been intended. They were under constant enemy attack from the air and it was obvious that if this country was to live the ports must be cleared of all impedimenta. All cotton was removed from Liverpool and Manchester warehouses and stored up country mainly in the open air. Shipping, once having left its port of loading, disappeared under the security mantle of the Admiralty. It might turn up at Liverpool but it might also appear at Bristol or Glasgow. Many ships, alas, never turned up at all. Column 4 of Table 2 provides a clear chart of the course of submarine and aerial attacks on shipping. I believe cotton was more fortunate than some commodities but, in 1942, losses at sea represented nearly 9 per cent. of imports. It is not surprising that in circumstances such as these it should have been decided that an entirely new form of organisation was needed. In April, 1942, Cotton Importers and Distributors Ltd., was wound up and thereafter the Control imported, stored, and distributed the cotton, using selected merchants as its agents.

The story of the development of open-air storage is itself a most interesting one. Some people held that it could not be done but when the ports had to be cleared there was no alternative. Level sites were floored with cinders, a layer of bales mounted on bricks, further bales piled on top in pyramid form and the whole covered by tarpaulins. The first site was initiated in a blizzard, the office work of checking, etc., being done in a small motor car. Experience has taught much. Later sites were rapidly cleared and levelled by bulldozers. Steel covers have been used instead of tarpaulins. The right number of bricks and the right way to place them has been found and other small but important improvements applied. There are now well over a million bales stored on open sites.

When it became necessary to clear cotton from the ports, spinners were asked to increase their stocks of cotton to the maximum. They responded nobly. Stocks of raw cotton in spinners' hands increased from 169 tons per 100,000 spindles in running mills at the end of 1938, to 477 tons at the end of 1943. In order to enable them to do so without risk of financial loss a cover scheme was introduced by the Control. This had in any event been rendered necessary by the closing of the futures market. Cover had originally been provided by supplying cover notes which enabled spinners to cover a limited yarn order book at the current price of raw cotton even if prices changed before the cotton was actually bought. The later cover scheme was simpler and more direct. The Control entered into a mutual agreement with each spinner to pay differences on his long or short position in the event of a price change.

Tables 3, 4 and 5 show the course of consumption and stocks of the different growths of cotton. Perhaps the most obvious feature is the relative reduction in American and its replacement mainly by Brazilian and Congo cotton. Many spinners had experience of these growths for the first time during the war. Nevertheless it would hardly have been possible for the trade to carry on but for the introduction of

lease-lend. The provision of materials in this way was understandably made subject to certain conditions. The Act was passed as a means of pooling resources to win the war and not of helping America's competitors to greater success. Restrictions were imposed on re-export. With cotton these restrictions were interpreted generously. It was obviously impossible to tie a label to every fibre of lease-lend cotton and trace its history. We had, however, to comply with two conditions. Consumption of cotton for war and essential home use must be greater than lease-lend supplies and exports must be less. During the war there was never any difficulty in complying with both conditions.

Not only in effecting efficient use of substitutes for American cotton but in other ways spinners showed great skill and adaptability. At one stage (in 1942) there was a critical shortage of long staple Egyptian cotton. Its use had to be confined to the most essential war uses, such as tyres, and other users had to substitute East African and even the longer stapled American varieties. The technical and financial problems involved were successfully overcome with the ready co-operation of all concerned. Again, when Giza 7 cotton failed and was replaced by Karnak the difficulties were so swiftly overcome by spinners as almost to make the task look easy.

The course of raw cotton prices is shown in Table 1. Up to March, 1941, when the market closed there were continual variations. The prices shown are at arbitrarily chosen dates. Thereafter the only changes were on the dates given. From April 1 to October 12, 1941, prices were frozen at those ruling at the close of the market on March 31. In October the prices were revised, without any substantial overall change, to bring them more into line with spinning values. The reductions in price in March, 1942, and February, 1943, were to offset increases in spinning and weaving costs and so to prevent a general rise in home market prices. In April, 1944, there was a departure from this policy. Otherwise the time might have come when the Control would have to give money with every pound of cotton to offset an increase in, say, making up charges. Cotton

prices were raised by 4½d. per lb. and the home prices of cotton goods were stabilised by a direct subsidy to converters on utility cloths.

This country emerged from the war with very substantial raw cotton stocks. This was partly due to long term purchase agreements made during the war with British Colonies and with the Sudan. In addition large quantities were bought from other cotton producing countries which, at the time, were cut off from many of their normal customers. These purchases were made at prices which were most acceptable to the producing countries at the time. Now it is clear that they were advantageous to us. They have enabled the Control, without loss, to insulate the industry here from the worst of the post-war price variations abroad.

LABOUR

Opinions may differ as to which aspect of the industry's war effort presents the greatest element of drama, but I think the industry's sacrifice is most clearly shown in the labour situation.

Soon after the outbreak of war, towards the end of 1939, every mill found that its order book, which it was accustomed to regard as half active and perhaps a quarter moribund, had become wholly and vigorously alive. There was business for every spindle that could run and employment reached a peak. Nevertheless, even then, less than 90 per cent. of the spindles in place were running. This was the cloud, then no bigger than a man's hand, which by now covers the whole sky:-

I think there is little doubt that in the early days of the war the vital part which cotton was to play was not foreseen. Non-textile people when they heard the word "cotton" thought of tablecloths, shirts, ties and summer frocks—not of tyres, hose-pipes, electrical insulation, parachutes, and a host of other items without which a modern army cannot move. During the stirring days of 1940, the industry, a microcosm of the nation, followed the national mood from facile optimism

beneath steadily darkening skies to the nerve-shaking catastrophe of the collapse of France and Dunkirk. Thereafter, as labour drifted away from the cotton mills, the industry marched steadily down an increasingly thorny path but with head held high towards its own Dunkirk—concentration. When the nation fully awoke to a realisation of the blood, toil, tears and sweat which lay before it, the North-West was chosen for some of the chief developments of democracy's arsenal, not only because of its supposed relative immunity from air attack but also because of its known store of skilled and energetic labour. Great filling factories were set up at Euxton and Risley and extensions of electric, wireless (radar) and aircraft works were put in hand. Work in these centres was more obviously prosecuting the war than spinning 16s weft and labour left the mills at an increasing rate to be welcomed with open arms in their new work. It is easy to be wise after the event and it may well be that an earlier application of the Essential Works Order would have prevented much wastage. However that may be, positive action was forced early in 1941, by the increasing shortage of shipping. It became necessary to allocate the available space to the most essential needs. The share of cotton was not sufficient to meet more than 70 per cent. of the industry's current requirements. Production had to be curtailed and an awkward choice had to be made. Should the reduced production be concentrated in fewer mills running near to capacity or should all mills continue to run at a reduced rate of activity? It was unfortunate that the Controller at the time was instructed to consult the trade on the point when apparently a Government decision had already been reached though not announced. The trade expressed a preference for the spread-over principle, but the Government, in order to achieve the most efficient use of labour, to save fuel, and to release factory space for storage and war production use, decided on concentration.

In spinning the process of concentration had to start before the Government White Paper was published setting out the officially approved principles which were to govern

the policy. Cotton consumption had to be cut at once if the industry was not to be brought to a full stop later on and if the unregulated drift of labour away from the mills had continued much longer it would have been too late to concentrate.

Deciding which mills were to stop was a most invidious task ; the most unpleasant one the Control had to perform. There could not be any clear-cut criteria ; the problem was too complicated. Regard had to be paid to the areas in which labour was required for other war purposes, the extent to which mills were already engaged on essential work or were set out for such work likely to be required, their flexibility in dealing with different types of raw cotton, the amount of transport necessary to keep them running, the proximity of other mills which could absorb or supply experienced labour. Other things being equal, ring spindles were preferred to mules because they employ female instead of male labour, but a balance had to be kept between twist and weft. The balance could not be a normal one because war demands for canvas were high and this meant using twist spindles to produce weft because the yarn had to be doubled before weaving.

During the process of concentration regular and frequent meetings were held with the Ministry of Labour, whose demands for labour were insatiable, especially in certain areas. Table 7 shows a typical statement considered at one such meeting and Table 8 shows the final result in the spinning section. It will be noticed that the proportion of ring spindles in closed mills was substantially less than that of mule spindles. Of the larger spinning areas Chorley and Preston and Leigh and Warrington suffered most, because of their nearness respectively to the large shell filling factories at Euxton and Risley.

Concentration in doubling and weaving followed later in the year but in their case the difficulties were mitigated by prior publication of the Government's plans and the greater facility in those sections for mutual concentration arrangements

whereby the business of a closed mill could be kept in being through the assistance of a running mill.

It was the intention that closed mills should be kept in condition to restart. This might have been vital if many nucleus mills had suffered from enemy-action. With this in view, the Cotton Board, by agreement with the trade, arranged and administered a care and maintenance fund for each section whereby the running mills contributed to a fund from which payments were made to the closed mills. These funds have been an essential feature of deconcentration by helping to offset the heavy losses involved in restarting mills.

Concentration did not put a term to the industry's labour difficulties. Losses continued from death, retirement, recruitment for the forces and some further drift to other industries. Table 9 tells the story. After concentration the spinning section had 80,000 operatives at work. By the beginning of 1945 the number had dropped to less than 70,000. Deconcentration then started and by the middle of 1946 there had been an improvement to over 86,000 but this was still a lot less than the number employed in 1937 (probably about 125,000 on a comparable basis). The course of events in the other sections is similar except that deconcentration has not gone so far.

Two other tables are worthy of special attention. Table 10 shows the intake of labour in spinning since March this year. The last two columns show the net intake of male and female labour and the steady decline is ominous. It might be expected that the gross intake would decline. The disturbing feature is that the gross losses remain high. A glance at Tables 11, 12 and 13, provides an explanation and suggests that unless there is some substantial new development no early improvement can be expected. In 1939, nearly half the male labour force was between the ages of 20 and 40 and only a third was between 40 and 60. In 1945, well over a half was between the ages of 40 and 60 while less than a quarter was between 20 and 40. The percentage of insured women up to 35 years of age fell from 77 in 1939, to 57 in 1945. In these circumstances losses

must remain high for some years to come. In this connection a social change of importance is suggested by Table 12. The number of young married women employees (up to 35 years of age) in 1945 was less than a half of the number in 1939. Above that age the proportion was over two-thirds, nearer to the general average of the whole labour force of the industry.

On one occasion during the war a Cabinet Minister made a statement, with obvious conviction, to the effect that had the contribution of the cotton industry to the labour shortage in munitions been less ready and effective than it was we might have lost the war. The industry may well take a lasting pride in that testimonial even though at present the pride must be tinged with sombre reflections.

PRODUCTION

The course of production has naturally followed that of the labour force. The experience after concentration is most clearly summarised in Table 14, dealing with single yarn output. Each year, owing to holidays, the general trend was downwards from the first to the third quarter, with a recovery in the fourth quarter. This general movement was sometimes affected by illness in the fourth or first quarter. To some extent concealed by the seasonal movement there was a steady downward trend not interrupted till deconcentration started in 1945. By 1942, the shortage of cotton yarn was making itself felt and spinners were asked to work overtime, increasing weekly hours from 48 to 52. Overtime was never universally popular. It could hardly be in view of all the other worries and hardships with which managements and operatives had to contend. They were perhaps too near the trees to see the wood. For three successive years overtime was worked from March to October. It was felt to be useless to continue it during the winter months in view of the black-out. The experience each year was the same. As soon as overtime started production increased by about 6 per cent. (as against the $8\frac{1}{2}$ per cent. increase in hours). The weekly gain then steadily declined until, just before it was stopped, the gain was hardly

noticeable. As soon as it stopped production fell by at least 6 per cent. and then gradually recovered. Over all there was a small gain in production. It might be argued now that the gain was too small to justify the harmful effects, many of which cannot be measured. It must be remembered, however, that at the time the country was fighting for its life. Shortage of yarn meant holding up vital war plans ; literally vital in that every delay meant more loss of allied life. Every extra pound of yarn was valuable. The eventual price, in impaired health and overworked machinery was a secondary consideration. It is worth recording that each year during the winter months, when the trade reverted to normal hours, the Controller received several letters from operatives urging continual overtime as a means of shortening the war.

The details given in Tables 15 and 16 of yarn production by types and count groups are of interest. Comparison of the last quarter of 1940 with 1942 shows that concentration had least effect on coarse ring yarns and fine mule twist yarns and medium-fine mule weft yarns. This arose from the insatiable war-time demand for canvases, balloon and parachute cloths and anti-gas cloth. In one sense, it is a little sad now to think of all the material, time and effort expended in producing millions of yards of anti-gas cloth which was never used. In another sense it is a matter for congratulation. War must always be wasteful. Production since the end of the war naturally shows the reverse trend.

Production of woven cloths in broad groups is shown in Table 17 for the last complete year and since. By the second quarter of 1946 production of canvas and ducks had fallen to little more than half the level of the first quarter of 1944. Fine cloth production, after an initial post-war decline has recovered. These simple figures conceal a remarkable achievement by the industry in adaption to demand. The technical problems involved were searching and complex. They have been overcome so smoothly that little has been heard of them in public.

The course of deconcentration in spinning is shown in Table 18. By August, 1946, the number of restarted mills had reached 125 (about two-thirds of those closed under concentration) with a weekly production of over 2 million lbs. These figures, too, conceal rather than reveal an energetic overcoming of difficulties. Even in August, 1946, the percentage of spindles running in the restarted mills was only 43 per cent. The measures taken by the Control to minimise waste of labour and the repercussions on the nucleus mills during deconcentration are no part of the subject of this paper. They would have been useless without the enthusiastic enterprise of the restarting mills and the sympathetic co-operation of the nucleus mills.

CONTROL OF PRODUCTION

It was not enough during the war for the industry simply to produce as much as possible. The production had to be of the right kinds and it had to be guided into the right channels with as little delay as possible. This was bound to involve detailed interference with individual wishes without the possibility in most cases of explaining why. In this, as in many other phases of national life during the war, any slowness of progress arose rather from Government hesitancy to interfere than from any resistance from the controlled. Generally, the industry was ready and indeed anxious to do what was required.

The earliest attempts to influence the course of production were specific and unrelated to any general plan. There was, for example, the Saturday noon when an urgent telephone call was received at the Control asking for immediate delivery of an astonishing quantity of tape about an inch wide. The thickness was carefully specified. A weekend of telephone calls to directors and managers showed that delivery could not be effected for some time if the tape was woven as small-wares. A Manchester firm provided the solution by cutting up wide cloth on a machine designed for cutting paper strips. Bulk deliveries were being made within a week. That was the cotton industry's part in the summary defeat of the magnetic mine.

Some members of the Society will remember the request of the Minister of Aircraft Production in 1940 for the delivery of balloon cloth to be doubled at once. Double shift working with transfer of labour from other work was the only solution and with the ready co-operation of managements, operatives and trades unions it was promptly applied.

At an early stage in the war it became necessary greatly to increase production of coarse yarns for canvases and denims for military use. A start had been made before the war and it is possible that some firms thought that production had already gone as far as it could. The industry quickly proved that this was not so. Firms which had never thought of producing such articles became important suppliers. At one stage the Deputy Controller interviewed spinners at twenty minute intervals about increasing production of 14s, 13s, 12s and even 9½s. The yarn was found and some who came to scoff departed to break the news to their fellow directors of the commitments they had to meet.

At a later stage it became necessary to expand production of hosiery yarns. When concentration took place hosiery yarns were not regarded as very important. They were not used largely for export and civilian needs were regarded as secondary. When this view was changed one or two closed hosiery yarn mills were specially restarted and production of hosiery yarns in nucleus mills was sharply expanded. To this effort, the rayon staple spinners made an important contribution.

The first comprehensive effort to guide production into essential channels was a "preference direction" system, introduced in February, 1940. The Minister of Supply took power to direct any firm to give preference to the performance of a particular contract, to the detriment if necessary of non-preference contracts. Notice the reluctance of a diffident government to shock the trade with such a rude but accurate word as "priority" which the trade itself was using freely. No attempt was made at this stage to interfere with the acceptance of contracts. Only after a contract had been made could a preference direction be issued. Directions were of

two kinds ; (A) preference for Government orders and essential home uses (broadly, goods required to keep other industries going) and (B) preference for export orders. The latter were identified by chambers of commerce and in some cases by trade associations.

The system was cumbersome but it served some useful purposes. It helped to sort out the industry's overburdened order books. In time it became almost impossible to get a new contract accepted unless a promise of preference directions to follow was given. One unexpected benefit of the system was revealed after the heavy air raids of the winter of 1940-41. Some Manchester merchant firms whose records were destroyed along with their premises found that the forms they had completed with such labour and returned to the Control enabled them to fill the gap. Blessings have been less heavily disguised.

Preference directions were supposed to give protection to firms against claims for breach of contract where they set non-preference contracts aside. I doubt if they would have done. All the contracts had been entered into freely and I think the Courts might well have taken the view that it was not the preference directions but the over-booking which made it impossible to carry out the non-preference contracts. Fortunately, the point was never tested. If necessary the Control could have frustrated the non-preference contracts by a direction to deliver only against preference contracts. This course was followed in one or two cases as a safeguard.

The system received its congé when concentration took place. By then 85 per cent. of the industry's output was covered by preference directions. Concentration reduced output by over a third. If nothing further had been done many Class B contracts would have become valueless and non-preference business would have come to a complete standstill. It was becoming recognised at that time that civilians must have some supplies if they were to continue to produce the sinews of war.

The solution of the difficulty was an allocation system whereby the expected output was distributed beforehand among the various claimants for a share of the inadequate total. Allocation holders were free to place or authorise orders within their allocations. Firms were free to accept authorised orders. The operative control was exercised by licensing deliveries of yarn against authorised orders. At each stage of a contract or sub-contract the buyer made a return to the Control, signed by the seller. Only if all the returns were in order was the yarn licence issued. The system had three serious drawbacks, the first of which was fatal. As the only common measure upon which to base allocations was single yarn weight, each allocation was a weight in tons of a single yarn, without any restrictions on quality or counts. The main war-time increase in demand was in coarse counts. The result was that the allocation holders, although their aggregate allocations roughly balanced the output, were trying to acquire a weight of coarse counts much in excess of the production in that range while producers of fine counts could not obtain sufficient approved orders to absorb their output. This over simplifies the problem. It did not arise only as between coarse and fine counts but that example illustrates the point. Secondly, the necessity of returns at each stage to the Control before the yarn was licensed, combined with the fact that many firms were undertaking types of business to which they were not accustomed and therefore were not familiar with all the possible sources of supply, led to serious delays between the authorisation of the original contracts and the final licensing of the yarn. Thirdly, some approved orders were very small. Since each was licensed right through individually, some yarn licences were ridiculously small. Licences for $\frac{1}{2}$ lb. of yarn were not unknown.

The first difficulty was accentuated by the fact that production was continually, if slowly, declining. Each firm can vary the nature of its production within narrow limits, though its ability to do so declines with its rate of activity. Most users of cotton goods can vary the nature of their demands,

also within limits, but their ability to do so declines with the growing inadequacy of their allocations. The two possible variations may produce a fit but only if there is a central authority guiding the efforts of both producers and consumers. This has been the main function of the Planning Sections of the Control.

Before this stage was reached certain other features essential to equitable distribution were introduced. The Cotton Board devised and operated systems for allocating available home civilian and export production among converters skilled in the classes of trade concerned. Denuding of the shops, with consequent complete gaps in the flow of supplies was prevented by introducing consumer rationing in 1941, and the Limitation of Supplies Orders further served to even out the reduced flow of goods. These measures brought their quota of worries in their train but without any one of them there might well have been chaos. '

Production planning was started in 1942 but could only be introduced gradually. I apologise for the word "planning." It has acquired a colour which is not universally pleasing but there is no Deed Poll procedure for words hastily chosen in the stress of war. By the end of 1942 no order could be placed in the industry except through the Control but the Control was not merely a pipe-line; still less a bottle-neck. Departments with allocations were encouraged to put down long-term programmes which were discussed with the Control and modified as necessary to meet technical limitations.

The Utility Programme is an outstanding example. When it was first mooted it appeared very difficult in such a complex industry as cotton to lay down minimum quality and maximum price specifications for a wide enough range of cloths and to arrange for their production in proper relative proportions to meet consumer demand. Nevertheless, it has been done and now looks relatively simple. I expect even Wooderson staggered over his first steps as an infant. Not everybody is an enthusiastic supporter of the utility principle but it has shown that a wide variety of garments can

be produced from a very limited range of weaves and yarns, that continuous running is at least possible for the home market and that uniform quality can be sustained, given the will and the means.

Planning, even during a period of contracting output, enabled the ragged edges of output on the one hand and demand on the other to be smoothed out or so bent that the two fitted each other. The effort was at times severe. Throughout the war the demand for canvases was heavy. During the preparations for D-day and afterwards it was so insistent that it became necessary to allocate canvases separately among claimant departments. This permitted a long-term programme to be laid down and so maintained production at the maximum by avoiding unnecessary changes.

Planning also had other advantages of some of which the trade was not always aware. It insulated the trade from the vagaries of Government departments which appeared at times to think that cotton goods could be turned on and off as by a tap. It also enabled urgent and unexpected war demands to be met by switching production at any stage from one use to another. Frequent recourse was had to this expedient.

The whole system of allocations and production control rested on regular and accurate statistics. The trade must at times have been very weary of filling up their weekly returns but they were vital. Table 19 is a specimen of the kind of statement which was prepared fortnightly and formed the basis of the whole system. It would take another paper of inordinate length to call attention to all the features of this statement which are worthy of attention. Especially to those in the cotton trade it will repay careful study. It conceals a lot of details some of which are given in the two succeeding tables. These show the separate items covered by the general classes "Essential Home Services" and "Civilian Home Trade" and help to set in proper perspective the idea prevalent in some quarters that cotton means a few such items as shirts, ties, towels and aprons.

Table 22 shows for the whole period of the allocation system how, in total, allocations, deliveries and production compared with requirements. Allocations were, of course, consistently below requirements. Otherwise there would have been no need for an allocation system. Deliveries were sometimes over but more often under allocations. This was partly due to the constant temptation to be optimistic in the face of pathetic appeals for just a little higher allocation. In view, however, of the uncertainties of the future especially in war time, perhaps the most surprising thing is the closeness of correspondence of the figures.

As soon as it was clear that production was on the up-grade after the war, general planning was stopped. I have emphasised that its main need arose from the earlier contraction of production. Lessons, however, had been learned from experience before the introduction of planning. The main differences now are that spinners are limited in their sales to what they can expect to produce, the utility programme is still planned at the weaving stage and weaving firms are limited in their yarn purchases to what they can expect to consume.

So far I have said little about exports. In the early days of the war exports were vital. It was for that reason that the Cotton Board was divided in organisation though not in spirit from the Cotton Control, and British Overseas Cottons Ltd. was set up. In the early part of 1940, the Cotton Controller, (a Ministry of Supply official) was also Chairman of the Cotton Board, the body to which the Board of Trade looked to encourage cotton exports. If a conflict arose between Ministry of Supply demands and export requirements his position would have been invidious.

The Cotton Board, after its formal constitution by Act of Parliament was used by the Board of Trade to organise the direction of export trade. British Overseas Cottons assisted export trade by giving long runs to producers and by negotiating with them derogations from the controlled prices where this was likely to be helpful in stimulating exports.

Export policy was completely reversed when the Lend-Lease Act was passed and the war function of this country became to act as an arsenal and an advanced aerodrome and base for the forces of democracy. The export functions of the Cotton Board changed with this reversal of policy though it continued to guide the reduced volume into the desired channels. As time passed many other war-time functions were thrust on the Board. Perhaps it would be useful if I set out the exact boundaries between the respective functions of the Board and the Control but I have already pointed out that I must resist the temptation to write a long book.

The industry had to confine all its production during the war to the effective prosecution of the war, without regard to its post-war interests. It was glad to do so. Since the war, it has not been able to relax discipline. Millions in the liberated areas, especially in the Far East have had to be clothed and once again regardless of long term interests this country has done its share. Some would say more than its share. The effectiveness with which the industry and the controlling organisation in this country delivered the goods during the war has perhaps led to greater demands being directed here than would otherwise have been the case.

Be that as it may, Tables 24 and 25 show the result. They show how some of the main peace-time markets for the industry's products have been and are still being neglected and how much of our limited production has been sent to markets which we know full well will in due course be served by others. This is part of the price the industry has paid for victory, not a very obvious part to the outside world, but one which should not be forgotten and the continued payment of which should be cut short as soon as possible.

I have necessarily drawn only the outline of the strait-jacket which the industry willingly donned during the war. Nobody was surprised or gravely disappointed that it was not taken off as soon as the war finished. It was realised that rehabilitation was likely to be as tough a job as winning the war. While supplies are advancing to meet requirements it

is understandable that allocations must continue. The time may, however, be close upon us when supplies, while still short of requirements, are not likely substantially to increase in the moderately near future. In those circumstances it would no longer be possible to regard restrictions as a temporary measure designed to hold the fort for a short time while reinforcements are coming up. If, or rather when, that position arises it will present a problem of an entirely different nature for the Government and the industry to solve.

PRICES AND PROFITS

In dealing with the subject of prices and profits, I propose to be even more sketchy than in some of the other sections, not because the matter is unimportant, but because it is a complex one which could not be treated fairly except in great detail and because it is concerned rather with difficulties of administration than with the efforts of the industry. The industry has had no difficulty in obtaining the prices which have been permitted. Over the small field which is not statutorily controlled more remunerative margins have been obtained though I think it is true to say that even here there has been nothing in the nature of a ramp.

It became clear before the end of 1939 that price control would have to be introduced. Yarn prices were rising steeply ; not, I think, because spinners wanted to profiteer but simply because they did not want more business. They were struggling with order books which, as I have already said, from being half dormant had suddenly become wakeful and clamorous. Spinners naturally did not like to say : "I don't want to sell you any yarn." Their only defence was to raise the price.

In those early days minds in the industry were deeply coloured by twenty years of bad trade and price cutting and by the successful outcome of two years' struggle to provide for legal minimum prices. When it became necessary to control prices, therefore, there was some debate whether it should be by way of maximum prices, a combination of maximum and (different) minimum prices or by fixed prices. The Cotton

Board finally decided on the last choice and with some difficulty persuaded the Government to consent. This consent was given on condition that the effect on profits was checked from time to time.

A start was made with single yarns in January, 1940. For this purpose the Control had at its disposal a lot of work done before the war by the industry itself with minimum prices in view. Broadly speaking the same general plan was adopted. American type yarns were divided into schedules according to their relative commercial values. A margin was prescribed for each count in each schedule and the price of any yarn was obtained by adding the margin to a single figure depending on the price level of raw cotton. Differences in raw cotton prices between schedules were taken care of in the margins. Egyptian type yarn prices were obtained by taking the actual cost of the raw cotton, applying to it a formula designed to cover waste loss and adding a margin which depended on the count, the amount of twist and the size of the package.

Statutory price control of doubled yarns and condenser and preparation yarns followed in June, 1940, and March, 1942. Control of loom-state cloth prices was delayed. This arose not only from the complexity of the problem but also from some division of purpose. Manufacturers were willing to co-operate in devising a scheme of price control which would give them a fair deal. The Government was still reluctant to compel the adoption of fixed prices unless this would clearly lead to reductions. During 1940, progress and stagnation oscillated with the condition of trade. At one time the Government was pressing for speed. By the time the trade had produced definite proposals, the Government had gone off the boil. An Order was finally made in April, 1942. Its effect was to raise some prices and lower others. On average it probably made little difference but a basis was provided upon which future changes could be built. There are many hundreds of different cloths but the number of independent variables is limited. The principle is to assess proper differentials for each

of these. In theory, the sum of any actual combination of values should then be relative to the cost involved. The first effort was deficient in some respects. Relatively, heavy and wide cloths were too generously treated. Later Orders were designed to correct these mistakes after a careful and detailed cost investigation had been made. Similarly, the first Order controlling doubled yarn prices was found to be relatively unjust to fine and hard twisted yarns. This, too, was later adjusted on the basis of a cost investigation. Costs are now being examined in detail in the spinning section.

The Cotton Control has been concerned with statutory price control only up to the loom-state cloth stage. Finishing charges have been negotiated by the Cotton Board, on behalf of the Board of Trade, with the trade associations concerned, and checked from time to time by reference to profit investigations. The Cotton Board has also negotiated maximum margins to be charged by converters.

Apart from the main purpose of preventing inflation, statutory price control in the cotton industry has brought about certain changes in trade practice. In particular it has introduced and, I hope, firmly established the decimal system of expressing prices. It has also removed the system of allowing discounts for prompt payment, after first allowing for them in cost, and has substituted net prices with an interest charge for late payment.

I have referred to the condition upon which consent to fixed prices was given. There have been a number of profit inquiries, two in condenser and preparation spinning, two in ordinary spinning, two in doubling and one in weaving. I do not propose to give the results. If they are to reveal any significance they must be hedged about with too many footnotes, explanations and exceptions. Broadly the aim of price control during the war, not only in cotton but generally, has been to provide ten per cent. on capital employed. Published balance sheets in the cotton industry suggest that this aim has been approximately achieved:

Perhaps I may be permitted to make one or two personal observations at the risk of an accusation of inconsistency after saying that I would keep away from controversial issues.

Except possibly in weaving, price control during the war has not been related sufficiently to costs and has rested too much upon trade practice, hallowed by tradition but not supported by attested facts. During the war it was probably impossible to be more accurate. All firms have been short staffed and attempts to obtain regular, accurate and comprehensive information would probably have failed and would only have resulted in irritation. Secondly, it has usually taken far too long to make adjustments to varying circumstances. In the absence of accurate cost information, constantly kept up-to-date, the only facts available (apart from specific wage changes) are profit results and these are always out-of-date when ascertained. If price control on statutory lines is to continue and if it is to be effected satisfactorily the responsible authority on the spot should not only have more complete and accurate information to work upon but should also have greater facility for giving effect to the conclusions reached without the necessity for prolonged explanation to and negotiations with the responsible authorities in London, who, though responsible, cannot be fully informed. The difficulty is admittedly great. It is the Minister who must answer parliamentary criticism and London officials who appear when necessary before the Public Accounts Committee. Nevertheless, the trouble is there and cannot be ignored. During the war it has been much easier to arrange a reduction in price than an increase. Although the principle of fixed prices has been accepted, the tendency (again in London) has been to regard the target figures as maxima only ; to be anxious if they are exceeded but complaisant if they are not reached.

Two other problems in the field of price control remain to be dealt with by the Government. I referred in the raw cotton section to the first attempt to stabilise retail prices in spite of rising costs by reducing raw cotton prices. Later this remedy was replaced by a direct subsidy on loom-state cloth

delivered to converters. Since then prices have continued to rise and so has the subsidy. It seems inconceivable that this can be a permanent feature of our national life. As it is most unlikely that costs will in the foreseeable future fall to the point at which the subsidy was first introduced, it will not be easy to remove the subsidy without considerable disturbance. It is easier in some ways to introduce control than to remove it. To tread on a stair that is not there going upstairs is uncomfortable. To do so going downstairs may be fatal.

The other problem is that of re-equipment, the cost of modern machinery and their relation to price control. This concerns the future rather than the industry's war effort. The Working Party has dealt with it at length and proposed a solution—which is denounced in the minority memorandum. I can do no more than mention it here.

CONCLUSION

I have had no time to do more than call attention to a few of the indications revealed by the tables. They will repay study by anyone concerned with the cotton industry. I should like to express my thanks to Mr. A. M. Cousins, head of the Control's Statistical Department, who compiled them.

The cotton industry achieved what it did during the war with a gay enthusiasm upon which some of us may now look back with a certain degree of wistfulness. All concerned wanted one thing more than anything else—to win the war quickly. The co-operation of the trade in distasteful measures of control was at times almost embarrassing. The attitude: "My mill is at your disposal, what do you want me to do with it?" was by no means confined to a few. Without that co-operation, control would have been impossible. No law can be really effective except with the consent of the governed, as the attempt at prohibition in the United States showed.

Now the problem arises of getting back to more normal conditions. Perhaps "back" is not the right word. There can be no going back but equally we cannot remain where we are.

Surprisingly there has been some resistance to the tentative efforts so far made by the Control to relax restrictions. When detailed production planning was stopped many firms said it was too soon. The nation generally has squandered its substance, not in riotous living but in preserving its existence and something even more valuable than life itself. It did so gladly ; it could have done no other, but it must now tackle the task of climbing back to prosperity. This is no place to discuss the best road. The problems, so far as the cotton industry is concerned have been exhaustively examined by the Working Party. It is obvious that the labour force and re-equipment are two of the main ones. It is equally clear that neither the Government nor the industry can achieve much without the help of the other. During the war, working together for a common aim they achieved much. Can they learn anything of value from that successful partnership? They can, but will they?

R. W., LACEY.

TABLE 1
RAW COTTON SPOT PRICES
Pence per lb.

Date	American Mid. 15/16 Spot quotation	Indian Superfine Bengal	Indian Superfine R.G. American Seed Punjab	Brazil Sao Paulo Type 4	Egyptian Giza 7 "Good" or Type 35	Egyptian Ashmouni "Good" or Type 3	Egyptian Karnak "Good" or Type 155
1939, end March	5.10	3.24	4.32	4.95	7.52	N 6.41	—
1939, 4 September	6.63	N 4.32	5.66	6.33	9.05	N 7.95	—
1940, end March	7.80	6.05	7.54	7.95	11.52	N 11.13	—
1940, end October	8.27	5.79	7.82	8.26	N 14.92	N 14.11	—
1941, end March	9.39	7.29	9.29	N 9.49	N 13.30	N 12.12	—
1941, 13 October	9.45	7.00	8.35	9.55	13.00	11.90	—
1942, 16 March ...	8.95	6.50	7.85	9.05	12.50	11.40	—
1943, 1 February	7.95	5.50	6.85	8.05	11.50	10.40	12.50
1944, 17 April ...	12.45	10.00	11.35	12.55	16.00	14.10	17.00
1946, 27 May ...	13.45	9.90	11.90	13.25	18.10	16.90	19.90

N means nominal.

Sources : Liverpool Cotton Circular and Cotton Control.

TABLE 2
RAW COTTON SUPPLIES
000 Tons

	Imports	Re-Exports	Losses by enemy action or fire		Consumption	Stocks		
			At Sea or abroad	In U.K.		At year end	Highest	Lowest
1937	741.1	26.5	—	—	639	308	—	—
1938	538.7	20.4	—	—	495	311	—	—
1939	571.4	19.0	—	—	588	275	—	—
1940	635.4	5.4	4.7	33.4	620	228	—	—
1941	364.5	—	13.6	1.8	430.7	178.7	204.5	105.2
1942	523.6	—	46.6	.1	419.2	290.5	346.7	183.4
1943	453.2	—	11.2	1.1	394.8	348.6	348.6	190.7
1944	359.6	—	5.2	.7	358.6	349.5	372.1	303.3
1945	398.3	17.9	—	—	319.7	411.1	411.1	331.3
1946 Jan.-June...	188.9	5.1	—	—	175.3	416.2	416.2	399.4

TABLE 3
RAW COTTON CONSUMPTION IN COTTON SPINNING
000 Tons

	Total	American	Indian	Brazilian	Brit. E. African	Brit. W. African	Belgian Congo	Fr. Eq. African	Russian	Egyptian	Sudan	Peruvian
1940 ...	603.0	298.2	51.6	44.1	—	—	—	—	—	115.8	25.0	34.8
1941 ...	412.4	181.4	51.6	31.1	—	2.7	—	—	—	71.1	17.0	12.1
1942 ...	377.6	154.9	42.1	40.3	5.4	11.4	18.9	3.9	—	61.7	30.3	8.3
1943 ...	367.1	165.6	36.3	16.1	12.2	6.3	17.8	1.7	1.9	79.1	23.9	5.4
1944 ...	345.5	134.7	23.0	41.9	7.5	3.7	21.8	1.8	3.0	72.8	27.0	6.8
1945 ...	307.9	117.3	18.3	41.0	6.3	3.3	16.2	2.5	1.9	61.9	29.4	8.4

Source : Cotton Control Statistics.

TABLE 4
RAW COTTON CONSUMPTION IN OTHER USES*
000 Tons

	Total	American	Indian	Belgian Congo	Fr. Eq. African	Peruvian
1940	17†	—	12†	—	—	5†
1941	18.3	—	13.5	—	—	3.1
1942	41.58	.62	31.73	.6	3.2	.71
1943	27.73	1.73	16.47	1.35	3.53	.28
1944	13.18	2.76	6.30	.75	.06	1.25
1945	11.74	2.33	5.67	.53	.17	1.75

* Including other spinning (cotton waste, woollen and asbestos spinning and mechanical cloth manufacture) and surgical dressing, upholstery, explosives and rayon manufacture, etc.

† Estimated.

TABLE 5
STOCKS OF RAW COTTON BY GROWTHS IN U.K.
000 Tons

End of Year	Total	American	Indian	Brazilian	Brit. E. African	Brit. W. African	Belgian Congo	Fr. Eq. African	Russian	Egyptian	Sudan	Peruvian
1937 ...	308	—	—	—	—	—	—	—	—	—	—	—
1938 ...	311	—	—	—	—	—	—	—	—	—	—	—
1939 ...	275	122.4	23	9.9	.7	—	—	—	—	55.8	25.0	28
1940 ...	228	116.7	29	11.3	—	.2	—	—	—	32.5	10.7	14
1941 ...	178.7	72.4	34.7	18.3	1.8	.5	3.2	—	—	27.3	14.4	3.0
1942 ...	290.5	63.0	48.8	13.3	13.8	3.9	6.4	.3	—	101.5	25.5	2.9
1943 ...	348.6	154.6	19.5	13.9	10.1	3.1	14.8	3.8	3.4	88.9	19.6	15.2
1944 ...	349.5	118.5	38.9	35.9	9.3	3.1	8.8	.8	4.2	78.5	34.2	12.7
1945 Jun.	376.4	113.3	40.3	42.9	13.9	2.4	9.9	5.2	.6	87.4	47.4	9.6

Source : Cotton Control Statistics.

TABLE 6
COTTON WASTE
000 Tons

	Imports	CONSUMPTION									Exports*
		Total	Spinning		Explosives	Surgical Dressings	Upholstery and Bedding	Cleaning Waste	Others		
			Waste	Cotton Woollen							
1940 July-Dec.	11.85	52.26	26.76	2.31	1.08	16.56	1.53	3.78	—	.24	.69
1941 ...	22.23	111.39	38.67	2.76	2.76	36.63	3.75	5.85	19.56	1.41	.53
1942 ...	33.68	92.47	29.08	.46	2.47	30.70	3.10	5.57	18.71	2.38	.11
1943 ...	23.69	75.94	30.80	.30	2.55	11.82	5.31	3.06	13.63	8.47	.03
1944 ...	15.87	66.86	32.32	.34	2.32	—	6.67	3.94	15.01	6.26	.05
1945 ...	22.74	67.74	31.18	.42	2.16	.39	7.57	5.01	14.90	6.11	2.47

* Excluding Manufactured Cleaning Waste.

Source : Cotton Control Statistics.

TABLE 7
ANALYSIS BY DISTRICT OF NUCLEUS AND OTHER MILLS AT APRIL 24th, 1941

	Total		Nucleus Mills				Mills from which final selection to be made		Other Mills not yet selected for closing		Mills closed by end April		Mills expected to close by end of May (internal arrangements)	
	No. of Mills	Spindles in place	Already Selected		Immediate Proposed Additions									
			Mills	Spis.	Mills	Spis.	Mills	Spis.	Mills	Spis.	Mills	Spis.	Mills	Spis.
Accrington	4	349	1	145	—	—	2	86	1	118	—	—	—	—
Ashton (1)	34	2,826	8	625	4	315	5	595	6	535	11	766	—	—
Blackburn	9	611	2	232	—	—	3	152	1	53	2	80	1	94
Bolton	54	7,485	22	3,310	3	371	7	1,257	6	617	13	1,408	3	522
Burnley	4	210	1	21	—	—	2	90	1	99	—	—	—	—
Bury (2)	18	1,427	7	742	2	103	3	157	3	85	2	289	1	51
Chorley	7	543	2	189	1	40	1	25	2	136	1	153	—	—
Clietheroe	2	165	—	—	—	—	1	122	1	43	1	21	—	—
Hasingden (3)	6	281	3	222	—	—	1	26	1	12	2	255	—	—
Leigh and Warrington	20	2,784	6	834	4	621	—	—	4	556	2	255	4	608
Manchester	21	1,648	10	928	1	26	2	278	2	147	4	177	2	92
Oldham (4)	91	8,528	19	1,862	20	1,940	15	1,668	18	1,351	13	1,209	6	498
Padiham	2	97	1	54	—	—	1	43	—	—	—	—	—	—
Preston	15	1,185	2	91	—	—	4	371	3	256	5	390	1	77
Rochdale...	36	3,280	15	1,483	3	332	1	138	12	786	5	541	—	—
Royton (5)	32	3,531	11	1,345	1	63	13	1,462	4	340	2	219	1	102
Stockport	16	1,752	9	1,183	1	137	1	96	2	105	3	231	—	—
Todmorden	4	248	2	160	—	—	2	88	—	—	—	—	—	—
Wigan	9	967	4	678	—	—	—	—	3	224	2	85	—	—
Lancaster and Carlisle	4	139	4	139	—	—	—	—	—	—	—	—	—	—
Glossop	3	262	1	14	—	—	2	248	—	—	—	—	—	—
Skipton	1	34	1	34	—	—	—	—	—	—	—	—	—	—
Rest of Yorkshire*	15*	423	—	—	—	—	15*	423	—	—	—	—	—	—
Scotland	7	483	7	483	—	—	—	—	—	—	—	—	—	—
South of England	1	21	—	—	—	—	—	—	1	21	—	—	—	—
TOTAL †	415	39,389	138	14,774	40	3,948	81	7,325	71	5,474	66	5,824	19	2,044

(1) Including Stalybridge, Hyde, Denton, Mossley, Droylsden.
 (2) Including Ramsbottom, Radcliffe, Heywood.
 (3) Including Rawtenstall, Bacup.

* Awaiting special scheme.
 † Mills wholly on staple fibre are excluded from the table.

(4) Including Chadderton, Fallsworth, Middleton, Hollinwood.
 (5) Including Shaw.

TABLE 8
CONCENTRATION IN COTTON SPINNING
 (Figures relate to the end of 1941)
 000's

	Spindles Installed in all Mills			Spindles Installed in closed Mills					
	Total M.E.	Mule	Ring	Total M.E.		Mule		Ring	
				Number	% of Total	Number	% of Total	Number	% of Total
Accrington	349.3	120.3	152.7	118.5	34	118.5	99	—	—
Ashton	2,830.4	1,586.9	829.0	1,035.5	37	596.8	38	292.4	35
Blackburn	600.7	74.0	351.1	263.0	44	60.7	82	134.9	38
Bolton	7,749.1	5,838.3	1,273.9	2,772.4	36	2,557.9	44	143.0	11
Burnley	215.0	79.5	90.5	21.4	10	—	—	14.3	16
Bury	1,379.5	761.8	411.8	501.6	36	169.5	22	221.4	54
Chorley	544.0	342.4	134.4	355.1	65	213.6	62	94.4	70
Clietheroe	42.5	—	28.2	42.5	100	—	—	28.3	100
Darwen	98.6	44.5	36.1	—	—	—	—	—	—
Haslingden	273.7	51.1	146.4	—	—	—	—	—	—
Leigh and Warrington	2,835.8	2,504.4	221.0	1,412.4	50	1,287.5	51	83.2	38
Manchester	1,451.3	607.0	562.9	455.2	31	306.1	50	99.4	18
Oldham	8,230.1	5,589.3	1,760.5	3,549.1	43	2,842.8	51	470.9	27
Padiham	96.6	—	64.4	—	—	—	—	—	—
Preston	1,051.3	539.2	341.4	648.3	62	294.0	55	236.2	69
Rochdale	3,253.4	952.0	1,534.2	1,014.6	31	463.5	49	367.4	24
Royton	3,703.1	2,756.7	630.9	1,005.4	38	1,125.6	41	186.5	30
Stockport	1,767.7	1,044.6	482.1	520.0	29	227.4	22	195.1	40
Todmorden	246.6	101.3	96.9	422.7	43	60.7	51	241.3	41
Wigan	993.6	117.9	583.8	—	—	—	—	—	—
Lancaster and Carlisle	142.7	28.0	76.5	—	—	—	—	—	—
Glossop	200.1	60.1	93.3	—	—	—	—	—	—
Skipton	28.8	—	19.2	94.0	25	86.2	40	5.2	5
Halifax	373.6	214.7	105.9	—	—	—	—	—	—
Scotland	482.3	—	321.5	—	—	—	—	—	—
South of England	21.3	—	14.2	—	—	—	—	—	—
TOTAL	38,961.1	23,413.8	10,364.9	14,631.7	38	10,410.8	44	2,813.9	27

Source : Cotton Control Statistics.

TABLE 9
EMPLOYMENT
000s.

End of Period	Cotton and Spun Rayon Spinning					Waste Spinning					Doubling					Cotton and Rayon Weaving				
	At Work			On Books		At Work			On Books		At Work			On Books		At Work			On Books	
	Total	Male	Fe- male	Total	Male	Total	Male	Fe- male	Total	Male	Total	Male	Fe- male	Total	Male	Total	Male	Fe- male	Total	Male
1937	176	68	108	—	—	—	—	—	—	—	—	—	—	—	—	187	62	125	—	—
1941/II	101.9	36.9	65.0	—	—	4.31	2.59	1.72	—	—	—	—	—	—	—	—	—	—	—	—
/III	79.8	28.9	50.9	—	—	4.79	2.94	1.85	—	—	—	—	—	—	—	—	—	—	—	—
/IV	77.13	27.52	49.61	—	—	—	—	—	—	—	—	—	—	—	—	108.21	33.23	74.98	—	—
1942/I	77.30	27.54	49.76	—	—	4.71	2.93	1.78	25.82	5.85	—	—	—	—	—	103.07	31.25	71.82	—	—
/II	78.21	27.64	50.57	—	—	4.77	2.89	1.88	25.22	5.48	—	—	—	—	—	102.33	30.84	71.49	—	—
/III	78.16	27.52	50.64	—	—	4.70	2.91	1.79	24.60	5.35	—	—	—	—	—	102.45	31.31	71.14	—	—
/IV	77.72	27.16	50.56	—	—	4.66	2.89	1.77	24.67	5.52	—	—	—	—	—	103.41	30.89	72.52	—	—
1943/I	75.85	26.50	49.35	—	—	4.59	2.83	1.76	24.64	5.23	—	—	—	—	—	106.26	30.19	71.07	—	—
/II	76.29	26.48	49.81	—	—	4.63	1.85	1.78	24.85	5.24	—	—	—	—	—	86.72	25.00	61.72	—	—
/III	75.12	26.24	48.88	—	—	4.59	2.83	1.76	24.74	5.24	—	—	—	—	—	98.06	29.21	68.85	—	—
/IV	71.84	25.28	46.56	—	—	4.57	2.80	1.77	23.83	5.11	—	—	—	—	—	93.91	28.48	65.43	—	—
1944/I	74.08	25.76	48.32	—	—	4.64	2.82	1.82	24.39	5.21	—	—	—	—	—	98.98	29.38	69.60	—	—
/II	71.73	25.07	46.66	29.34	26.45	4.82	2.80	1.82	23.10	5.10	—	—	—	—	—	86.72	25.00	61.72	—	—
/III	69.74	24.65	45.09	78.69	26.29	4.54	2.74	1.80	22.89	4.98	—	—	—	—	—	97.07	28.84	68.23	—	—
/IV	70.65	24.95	45.70	78.51	26.35	4.48	2.71	1.77	22.96	5.01	—	—	—	—	—	95.22	28.61	66.61	—	—
1945/I	69.64	24.83	44.81	77.70	26.25	4.53	2.73	1.80	22.55	4.96	—	—	—	—	—	97.04	29.14	67.90	—	—
/II	69.89	24.84	45.05	78.75	26.57	4.53	2.77	1.84	22.49	4.92	—	—	—	—	—	94.25	28.73	65.52	—	—
/III	71.53	25.81	45.72	80.40	27.29	4.61	2.88	1.92	22.28	4.98	—	—	—	—	—	95.90	28.95	66.95	—	—
/IV	75.74	28.32	47.42	85.61	29.86	4.80	2.95	1.92	21.32	5.00	—	—	—	—	—	96.45	29.32	67.13	—	—
1946/I	81.13	32.23	48.90	91.43	33.87	5.35	3.30	2.05	22.33	5.38	—	—	—	—	—	97.48	30.01	67.47	—	—
/II	86.43	35.60	50.86	96.42	37.29	5.71	3.56	2.15	23.26	5.87	—	—	—	—	—	98.74	31.98	66.76	—	—
											—	—	—	—	—	103.13	34.77	68.36	—	—
																			110.62	33.95
																				76.67
																				77.52

Source : Cotton Control Statistics.

TABLE 10
INTAKE, LOSS AND NET GAIN OF LABOUR IN SPINNING
 Weekly Averages

	GROSS INTAKE			GROSS LOSSES			NET GAIN		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1946 March (4)...	1390	650	740	737	258	479	653	392	261
April (4)...	1187	571	616	690	250	440	497	321	176
May (5)...	1271	576	695	712	255	457	559	322	237
June (4)...	799	347	452	641	218	423	159	130	29
July (5)...	774	324	450	625	213	412	149	111	38
Aug. (4)...	773	319	454	613	192	421	160	127	33
Sept. (4)...	833	316	517	678	240	438	155	76	79

Source : Cotton Control Statistics.

TABLE 11
AGE ANALYSIS OF INSURED MALES IN JULY 1939 AND 1945
000's

	Cotton Spinning, Doubling, Weaving and Textile Finishing				Total North-West Region				Total Great Britain			
	1939		1945		1939		1945		1939		1945	
	000	%	000	%	000	%	000	%	000	%	000	%
14-15	7.8	3.87	3.9	4.09	66.1	4.16	55.5	4.61	475.0	4.24	394.0	4.74
16-17	9.7	4.82	4.7	4.93	89.5	5.63	75.8	6.30	642.0	5.73	524.0	6.31
18-20	12.9	6.41	2.8	2.94	131.0	8.24	54.5	4.53	947.0	8.46	390.0	4.69
21-25	24.0	11.92	2.0	2.10	—	—	—	—	—	—	562.2	6.76
26-30	26.6	13.21	2.0	2.10	—	—	—	—	—	—	514.7	6.19
31-35	23.4	11.63	6.0	6.30	—	—	—	—	—	—	832.7	10.01
36-40	22.0	10.93	10.9	11.44	—	—	—	—	—	—	1024.3	12.32
41-45	19.1	9.49	13.4	14.06	—	—	—	—	—	—	1093.7	13.15
46-50	17.0	8.45	13.1	13.75	—	—	—	—	—	—	926.3	11.14
51-55	16.4	8.15	14.0	14.69	—	—	—	—	—	—	825.9	9.93
56-60	13.2	6.56	13.9	14.59	—	—	—	—	—	—	740.2	8.91
61-64	9.2	4.56	8.6	9.01	—	—	—	—	—	—	487.0	5.86
Total 21-64	170.9	84.90	83.9	88.04	1302.5	81.97	1018.3	84.56	9135.0	81.57	7007.0	84.27
TOTAL	201.3	100.00	95.3	100.00	1589.1	100.00	1204.1	100.00	11199.0	100.00	8315.0	100.00

Source: Ministry of Labour.

TABLE 12
AGE ANALYSIS OF INSURED FEMALES IN JULY 1939 AND 1945
000's

	Cotton Industry					N.W. Region		Great Britain		
	1939		1945			1939	1945	1939		
	Married and Widowed	Other	Total	Married and Widowed	Other	Total	Total	Married and Widowed	Other	Total
14-15 ...	—	15.4	15.4	—	8.2	8.2	62.2	—	359.0	359.0
16-17 ...	—	21.2	21.2	—	11.1	11.1	86.4	—	502.0	502.0
18-20 ...	1.6	27.9	29.5	1.3	18.0	19.3	124.0	45.0	687.1	732.1
21-25 ...	14.8	30.9	45.7	9.0	14.6	23.6	534.7	309.0	624.8	3569.9
26-30 ...	25.0	18.8	43.8	9.1	5.5	14.6		293.5	264.0	
31-35 ...	24.6	13.1	37.7	11.3	6.3	17.6		305.7	216.8	
36-40 ...	18.0	10.5	28.5	12.1	6.7	18.8		281.3	199.4	
41-45 ...	13.8	9.1	22.9	11.5	7.9	19.4		255.4	174.8	
46-50 ...	11.1	7.0	18.1	8.4	6.8	15.2	627.0	189.8	128.5	3569.9
51-55 ...	7.7	4.3	12.0	5.9	5.7	11.6		118.9	99.0	
56-59 ...	—	—	—	2.8	2.9	5.7		58.5	50.5	
60-64 ...	5.4	3.6	9.0	—	—	—		—	—	
61-64 ...	2.2	1.5	3.7	—	—	—		—	—	
Total ov. 21	122.6	98.8	221.4	70.1	56.4	126.5	534.7	1812.1	1757.8	3569.9
TOTAL ...	124.2	163.3	287.5	71.4	93.7	165.1	807.3	1857.1	3305.9	5163.0

Source : Ministry of Labour.

TABLE 13
AGE ANALYSIS OF INSURED FEMALES IN JULY 1939 AND 1945
Per cent.

	Cotton Industry				N.W. Region		Great Britain		
	1939		1945		1939	1945	1945		
	Married and Widowed	Other	Total	Married and Widowed	Total	Total	Married and Widowed	Other	Total
14-15 ...	—	9.43	5.36	—	4.97	7.71	—	10.86	6.95
16-17 ...	—	12.98	7.37	—	6.72	10.70	—	15.18	9.72
18-20 ...	1.29	17.09	10.26	1.82	11.69	15.36	2.42	20.79	14.18
21-25 ...	11.92	18.92	15.90	12.61	14.29	66.23	16.64	18.90	96.15
26-30 ...	20.31	11.51	15.23	12.75	5.87		15.81	7.99	
31-35 ...	19.81	8.02	13.11	15.83	8.84		16.46	6.56	
36-40 ...	14.49	6.43	9.91	16.95	7.15		15.15	6.03	
41-45 ...	11.10	5.57	7.97	16.10	8.43		13.75	5.29	
46-50 ...	8.94	4.29	6.30	11.76	7.26	72.25	10.22	3.89	96.15
51-55 ...	6.20	2.63	4.17	8.26	7.03	807.3	6.40	2.99	
56-59 ...	—	—	—	3.92	3.45		3.15	1.52	
60-64 ...	4.35	2.20	3.13	—	—		—	—	
61-64 ...	1.77	.92	1.29	—	—		—	—	
Total ov. 21	98.71	60.50	77.01	98.18	76.62	66.23	97.58	53.17	69.15
TOTAL ...	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
TOTAL Actual ...	124.2	163.3	287.5	71.4	165.1	807.3	1857.1	3305.9	5163.0

Source : Ministry of Labour.

TABLE 14
MACHINE ACTIVITY AND PRODUCTION

	SPINDLES INSTALLED						SPINDLES RUNNING		
	ALL MILLS			RUNNING MILLS					
	Total M.E.	Mule	Ring	Total M.E.	Mule	Ring	Total M.E.	Mule	Ring
	millions								
1941 ...	38.97	23.41	10.37	24.34	13.01	7.58	19.49	10.49	6.00
1942 ...	38.97	23.41	10.37	24.34	13.01	7.58	19.16	10.27	5.92
1943 ...	38.97	23.41	10.37	24.34	13.01	7.58	18.14	9.69	5.68
1944 ...	38.97	23.41	10.37	24.34	13.01	7.58	17.28	9.24	5.36
1945 ...	38.69	23.06	10.42	25.43	13.25	8.12	17.04	9.24	5.20
1946/I ...	38.44	22.84	10.40	29.61	16.53	8.72	18.57	10.54	5.35
1946/II	38.23	22.61	10.41	32.81	19.02	9.19	20.75	12.02	5.82

(a) COTTON AND SPUN RAYON SPINNING

Weekly averages

	Production of cotton spun rayon and mixture yarns				
	Average for year	Quarters			
		I	II	III	IV
	million lbs.				
1941 ...	—	—	—	—	14.86
1942 ...	14.76	15.20	14.85	14.17	14.83
1943 ...	14.11	14.29	13.90	14.23	14.02
1944 ...	13.39	14.20	13.65	12.80	12.90
1945 ...	12.01	12.20	12.09	11.14	12.62
1946/I ...	—	12.80	—	—	—
1946/II	—	—	13.31	—	—

(b) COTTON AND SPUN RAYON DOUBLING

Weekly averages

1947 COTTON AND COTTON-SPINNING			Weekly average				
	Spindles installed in running mills	Spindles running	Production of doubled yarns				
			Average for year	Quarters			
				I	II	III	IV
	000's			million lbs.			
1941 ...	3,050	2,490*	—	—	—	—	5.39
1942 ...	3,050	2,308	5.07	5.22	4.93	4.79	5.32
1943 ...	3,050	2,296	5.27	5.29	5.18	5.22	5.37
1944 ...	3,050	2,228	5.13	5.45	5.16	4.87	5.05
1945 ...	3,050	2,118	4.54	4.79	4.63	4.17	4.56
1946/I ...	3,029	2,163	—	4.38	—	—	—
1946/II	3,047	2,240	—	—	4.30	—	—

* last quarter

(c) COTTON AND RAYON WEAVING

Weekly averages

	LOOMS INSTALLED		LOOMS RUNNING		Production of cotton, rayon and mixture cloths				
	All mills	Running mills	On cotton and rayon fabrics	On other fabrics	Average for year	Quarters			
						I	II	III	IV
		000's			million yards				
1941 ...	497	343	293	—	—	—	—	39.6	40.9
1942 ...	505	347	228	15	39.5	39.5	38.9	38.0	41.6
1943 ...	506	352	225	16	39.2	40.9	39.7	37.3	39.0
1944 ...	508	354	226	15	37.3	39.2	37.8	34.1	37.9
1945 ...	507	353	219	15	35.6	36.6	36.4	32.1	37.2
1946/I ...	500	359	219	17	—	36.7	—	—	—
1946/II	499	372	225	18	—	—	38.2	—	—

Source : Cotton Control Statistics.

TABLE 15
PRODUCTION OF AMERICAN TYPE YARNS BY TYPE AND COUNT
 Weekly Averages in Million lbs.

	Mule Welf					Mule Twist					Ring					Total
	Up to 9	10-16	17-20	21-26	Over 26	Up to 9	10-16	17-20	21-26	Over 26	Up to 9	10-16	17-20	21-26	Over 26	
1940 4th Qtr. ...	14	174	95	53	128	33	123	33	30	76	96	408	148	88	168	1667
1941 ...	09	113	69	34	87	24	87	24	20	46	89	316	101	62	116	1197
1942 ...	03	87	55	37	65	19	78	22	20	34	76	289	99	74	95	1050
1943 ...	03	84	46	36	41	25	81	19	15	24	87	281	78	69	69	958
1944 ...	02	81	45	31	40	27	71	16	13	22	91	265	71	58	67	900
1945 ...	01	68	40	29	37	24	60	13	14	17	82	232	66	56	61	800
1946 1st Qtr. ...	01	71	43	32	49	23	56	17	15	16	83	235	70	57	61	829
2nd Qtr. ...	01	70	43	30	54	22	52	19	17	16	85	229	72	60	63	833

TABLE 16
PRODUCTION OF EGYPTIAN TYPE YARNS BY TYPE AND COUNT
 Weekly Averages in Million lbs.

	Mule Welf						Mule Twist						Ring						Total		
	17- -16	21- 20	27- 26	49- 48	81- 120	120 +	17- -16	21- 20	26- 26	48- 48	80- 80	120- 120	120 +	17- -16	21- 20	26- 26	48- 48	80- 80		120- 120	120 +
1940 4th Qtr. ...	08		26	22	07	01			104	68	24	05			123		68	35	06		537
1941 ...	01		17	16	05	01		18	54	48	23	05			104		54	29	04		382
1942 ...		04	13	22	04			08	49	59	22	05			81		61	33	04		360
1943 ...			01	19	21	04		04	02	03	47	58	03	28	40	32	66	31	04		385
1944 ...			19	21	04	01		04	02	04	42	62	02	30	37	29	68	29	04		378
1945 ...					22	03	01	03	02	03	39	57	01	32	27	26	62	26	04		348
1946 1st Qtr. ...	01		21	27	04	01		03	02	02	47	69	03	35	23	23	72	28	04		392
2nd Qtr. ...	01		28	28	06	01		03	02	03	53	74	03	38	22	21	80	30	04		430

Source : Cotton Control Statistics.

TABLE 17
COTTON CLOTH PRODUCTION
 Weekly averages in million yards

TYPE	1944				1945				1946	
	Qtr. I	Qtr. II	Qtr. III	Qtr. IV	Qtr. I	Qtr. II	Qtr. III	Qtr. IV	Qtr. I	Qtr. II
COTTON										
Warp Counts not over 32's—										
Drill and other Motion cloths	7.0	6.59	5.77	6.26	5.92	6.13	5.29	6.19	6.21	6.39
Canvas and Ducks	1.92	1.93	1.80	1.89	1.76	1.65	1.51	1.47	1.33	1.07
Tyre cord and Tyre fabric*	.60	.55	.52	.54	.46	.43	.39	.46	.48	.46
Towels and Towelling—Terry	1.01	1.00	.92	.95	.93	.90	.81	.96	.88	.89
Huck	.13	.09	.08	.08	.08	.07	.06	.05	.04	.05
Colour-Woven	1.70	1.59	1.30	1.48	1.37	1.31	1.17	1.34	1.42	1.49
Other—Over 60 in. wide	1.21	1.11	1.01	1.09	1.02	.97	.93	1.02	1.08	1.01
60 in. and Under	8.42	8.28	7.35	8.36	7.90	7.70	6.91	7.91	8.13	8.31
Warp Counts over 32's	11.61	11.22	10.08	11.21	11.07	11.19	9.59	11.46	10.68	11.99
TOTAL COTTON CLOTH	33.60	32.36	28.83	31.86	30.51	30.35	26.66	30.86	30.25	31.66
RAYON										
Tyre Fabric*	.13	.16	.21	.17	.21	.22	.22	.21	.27	.27
Other Wholly Rayon	4.75	4.46	4.26	4.83	4.81	4.70	4.39	5.29	5.45	5.46
COTTON/RAYON MIXTURES	.65	.61	.53	.55	.59	.61	.51	.63	.61	.71
NYLON	.06	.08	.28	.45	.45	.42	.29	.19	.07	.06
TOTAL RAYON, MIXTURE and NYLON CLOTH	5.59	5.49	5.28	6.00	6.06	5.95	5.41	6.32	6.40	6.50
TOTAL ALL CLOTHS	39.19	37.85	34.11	37.87	36.57	36.30	32.07	37.18	36.65	38.16

* Figures for tyre cord and fabric are given in million lbs. and included in the totals on a basis of 1 yd. per lb.

Source : Cotton Control Statistics.

TABLE 18
PROGRESS OF DECONCENTRATION IN SPINNING

At end of Month	Number of Mills Producing	Spindles at month end				Production in last week of month	Employment at month end			
		Installed		Running			At Work		On Books	
		Mule	Ring	Mule	Ring		Males	Females	Males	Females
		Millions				000 lbs.	Thousands			
1945—June ...	6	.44	.19	.12	.03	77.4	.28	.51	.39	.66
July ...	11	.59	.28	.16	.03	100.3	.39	.66	.47	.88
August ...	19	.63	.56	.19	.10	183.0	.62	1.29	.70	1.49
September ...	21	.77	.56	.28	.14	276.5	.87	1.70	.89	2.00
October ...	26	.98	.66	.40	.19	414.1	1.22	2.27	1.26	2.56
November ...	40	2.26	.68	.71	.23	630.0	2.08	3.06	2.15	3.50
December ...	44	2.60	.70	.89	.21	338.7	2.38	3.02	2.52	3.93
1946—January ...	53	3.29	.76	1.19	.26	825.3	3.02	3.80	3.19	4.59
February ...	70	4.35	.98	1.63	.35	1133.9	4.12	4.86	4.28	5.64
March ...	92	5.65	1.24	2.11	.44	1492.8	5.32	6.00	5.58	6.97
April ...	101	6.04	1.37	2.47	.48	1386.4	6.16	6.41	6.38	7.64
May ...	113	6.80	1.43	2.96	.59	2025.8	7.19	7.67	7.43	8.75
June ...	117	6.91	1.50	2.88	.60	2081.4	6.92	7.39	7.76	9.23
July ...	121	6.97	1.72	3.15	.60	2089.1	7.43	7.65	8.17	9.65
August ...	125	7.19	1.78	3.27	.64	2100.2	7.52	7.88	8.50	9.96

Source : Cotton Control Statistics.

TABLE 19

COTTON ALLOCATION

1944—Quarter IV ending December 30th, 1944—Position at December 30th (end of Quarter IV)
General Statement (including Canvas).

Tons of Yarn

Departments	Arrears at Sept. 30	CHARGED AGAINST ALLOCATIONS				Yarn delivered or used against Allocations in 1944/IV to Dec. 30
		1944/IV 100%	Period of Yarn Delivery		Total	
			1945/I 80%	1945/II and later		
Ministry of Supply	2,771	12,500	10,000	6,725	29,225	(12,500)
Air Ministry	—2	11,876	11,589	6,003	32,239	12,337
Admiralty—Naval	884	3,000	2,400	—	23	(10)
Admiralty—Anti-gas	35	2,563	1,772	1,615	7,015	8
Ministry of Air Prod.—Materials	579	300	240	807	6,026	(3,000)
Ministry of Air Prod.—Balloons	221	176	134	160	700	2,597
Ministry of Works and Planning	196	2,200	1,760	47	392	(300)
Ministry of Health	—89	1,919	1,464	1,185	5,145	176
Scottish Departments	—30	375	300	358	4,320	(2,200)
Home Office and Min. Home Sec.	27	415	270	202	877	2,042
Ministry of Food	496	700	560	53	959	(375)
Ministry of War Transport—Inland	380	419	374	377	1,637	457
Ministry of War Transport—Sea	—	475	380	60	1,049	(700)
		479	107	255	1,110	379
		95	72	35	532	(475)
		46	7	49	216	(95)
		70	56	4	27	56
		54	28	38	164	(70)
		1,100	880	3	112	79
		1,109	1,077	592	2,572	(1,100)
		1,400	1,120	588	3,270	1,211
		958	923	755	3,275	(1,400)
		375	300	188	2,449	931
		341	197	202	877	(375)
				86	624	330

Table 19 — continued

Table 19 — continued							
Departments		CHARGED AGAINST ALLOCATIONS				Tons of Yarn	
		Arrears at Sept. 30	Period of Yarn Delivery				
			1944/IV 100%	1945/I 80%	1945/II and later		
Ministry of Agric. and Fisheries	...	Allocation	90	72	48	210	(90)
Post Office Stores	...	Charged	92	39	20	130	68
Petroleum Department...	...	Allocation	90	72	48	210	(90)
	...	Charged	99	104	74	307	109
	...	Allocation	5	4	3	12	(5)
Crown Agents for Colonies	...	Charged	10	—	—	9	—
	...	Allocation	225	160	108	493	(225)
Board of Education	...	Charged	227	149	61	515	233
	...	Allocation	60	48	32	140	(60)
Government of N. Ireland	...	Charged	61	5	2	32	60
	...	Allocation	50	40	27	117	(50)
H.M. Stationery Office	...	Charged	23	—	—	45	26
	...	Allocation	60	48	32	140	(60)
	...	Charged	51	23	18	87	54
TOTAL DEPARTMENTS	...	Allocation	23,180	18,520	12,458	54,158	(23,180)
	...	Charged	20,925	18,267	8,407	53,134	21,664
INDUSTRIAL GROUPS							
Cordage	...	Allocation	2,250	1,800	1,210	5,260	(2,250)
	...	Charged	2,312	2,232	1,108	6,098	2,537
Narrow Fabrics	...	Allocation	3,200	2,560	1,722	7,482	(3,200)
	...	Charged	3,288	3,099	1,108	8,112	3,510
Tyres	...	Allocation	4,050	3,240	2,180	9,470	(4,050)
	...	Charged	4,214	3,740	56	8,906	3,818
Boots and Shoes	...	Allocation	715	576	387	1,678	(715)
	...	Charged	718	839	788	2,412	733
Rubber	...	Allocation	1,050	840	565	2,455	(1,050)
	...	Charged	898	953	345	2,477	921
Fuel and Power	...	Allocation	1,640	1,260	850	3,750	(1,640)
	...	Charged	1,572	1,387	238	3,588	1,521
Hosiery	...	Allocation	4,700	3,760	2,530	10,990	(4,700)
	...	Charged	4,303	3,525	769	9,313	4,099

Yarn delivered
or used against
Allocations
in 1944/IV
to Dec. 30

TABLE 20. COTTON ALLOCATION
 1944—Quarter IV ending December 30, 1944
 Essential Home Services—Position at December 30 (end of Quarter IV)
 Tons of Yarn

Description	Charged Against Allocation					Deliveries to Dec. 30
	Arrears at Sep. 30	Period of Yarn Delivery			Total	
		1944/IV 100%	1945/I 80%	Later		
Burnishing Mops		70	56	38	164	
	1	56	47	56	160	62
Cleaning and Sponge Cloths...		889	712	478	2,079	
	111	897	790	730	2,528	859
Bias Binding		150	120	81	351	
	—2	157	82	155	392	127
Hydraulic Packings		15	12	8	35	
	—2	15	18	6	37	23
Filter Cloths		300	240	161	701	
	75	345	160	84	664	306
Industrial Gloves		90	72	48	210	
	31	99	62	32	224	94
Bags (except food)		200	160	108	468	
	83	162	96	101	442	146
Welders' Curtains		—	—	—	—	
	2	—	—	—	2	—
Mechanical Cloths		500	400	269	1,169	
	179	631	373	310	1,493	567
Tarpaulins		400	320	215	935	
	244	432	269	477	1,422	398
Officers' Clothing		150	120	81	351	
	117	162	93	50	422	166
Glass Replacement		162	129	87	378	
	7	155	349	8	519	150
Protective Clothing		15	12	8	35	
	—12	12	4	5	9	16
Anti-scatter Net		30	24	16	70	
	—13	22	—	5	14	15
Tracing Cloth		120	96	64	280	
	7	129	66	96	298	90
Typewriter Ribbons		40	32	22	94	
	3	31	16	10	60	28
Healds and Reeds		40	32	22	94	
	—13	52	36	38	113	41
Battery Cloth		80	64	43	187	
	18	85	6	6	115	61
Sewing Thread		1,100	880	592	2,572	
	—97	1,278	198	176	1,555	1,160
Red Cross and St. John ...		100	80	54	234	
	43	129	76	40	288	116
Shrouds and C. Linings ...		100	80	54	234	
	45	53	77	71	246	90
Insulating Material		231	185	124	540	
	20	238	77	100	435	155
Selvedge Yarn		200	160	108	468	
	128	301	273	221	923	237
Miscellaneous		300	240	161	701	
	—327	461	263	212	609	364

The top rows of figures are the allocations and the bottom rows, the yarn charged.

Source : Cotton Control Statistics.

TABLE 21
COTTON ALLOCATION
 1944—Quarter IV ending December 30, 1944
 Civilian Home Trade—Position at December 30, 1944 (end of Quarter IV)

Tons of Yarn

Description	Yarn Licensed Against Allocations					Deliver- ies to Dec. 30
	Arrears	Period of Yarn Delivery			Total	
	at Sep. 30	1944/IV	1945/I	Later		
Apparel—						
Utility—Lancashire... ..	1,614	8,609	8,256	475	18,954	7,160
—N. Ireland	36	260	187	21	504	212
Non-Utility	120	234	233	132	719	207
TOTAL APPAREL ...	1,770	9,103	8,676	628	20,177	7,579
Household Textiles—						
Black-out	160	1,057	270	201	1,688	858
Quilts	69	227	75	8	379	197
Blankets	1,058	621	1,324	35	3,038	1,126
Sheets and Pillow Cotton ...	577	1,449	1,332	93	3,451	1,213
Curtain Material	—	21	464	98	583	78
Towels	67	1,090	652	15	1,824	1,019
Glasscloths and tea towels...	81	116	140	1	338	133
Dusters and Polishers ...	21	25	26	7	79	23
Mattresses and Tickings (Utility)	15	72	328	67	482	67
Mattresses and Tickings ...	70	273	2	—	345	250
Various Household Textiles	16	1	—	—	17	8
Quilts	—3	6	6	—	9	7
Leathercloth General ...	70	184	99	48	401	154
Leathercloth Prams ...	—109	88	111	19	109	113
Nursery Squares	8	33	34	29	104	33
Bookcloth	105	265	260	62	692	240
TOTAL HOUSEHOLD TEXTILES	2,205	5,528	5,123	683	13,539	5,520
Miscellaneous—						
Holland Blinds	—	8	12	5	25	15
Road Transport Linings ...	—11	1	—	—	—10	1
Railway Linings	—14	67	89	14	156	50
Hosiery Trimmings...	—4	96	86	24	202	94
Hand Knitting Yarns ...	142	104	28	—	274	69
Minor Uses	34	109	64	65	272	120
Utility Cloth Labels ...	—10	9	2	4	5	7
Personal Service League ...	—1	—	—	—	—1	—
Oilskins	—4	—	—	—	—4	—
Post War Samples	—9	2	7	—	—	3
Utility Furnishing Fabs. ...	14	12	204	59	289	84
Unspecified	—20	—	—	—	—20	1
TOTAL MISCELLANEOUS	117	408	492	171	1,188	444
GRAND TOTAL ...	4,094	15,039	14,291	1,482	34,906	13,543
Allocation... ..	—	15,100	12,080	8,125	35,305	—

Source : Cotton Control Statistics.

TABLE 22
COTTON REQUIREMENTS, ALLOCATIONS, DELIVERIES AND PRODUCTION
Tons of Yarn

	1941				1942				1943			
	III	I	II	III	IV	I	II	III	IV			
Requirements ...	118,371	116,932	105,528	114,361	108,133	112,960	117,611	114,310	111,673			
Allocations ...	103,700	97,731	95,652	94,725	92,115	92,268	93,100	91,990	90,000			
Deliveries ...	84,612	90,873	88,695	85,762	92,628	89,446	87,829	87,658	97,092			
Production ...	92,393	93,299	90,771	87,184	91,454	87,832	85,732	87,152	92,983			
Arrears ...									33,630			

Tons of Yarn											
	1944				1945				1946		
	I	II	III	IV	I	II	III	IV	I	II	III
Requirements ...	111,932	107,748	106,897	102,369	113,530	143,066	147,816	133,410	112,851	108,177	
Allocations ...	88,350	87,885	85,820	85,620	84,530	75,625	75,000	81,000	86,000	85,775	
Deliveries ...	91,429	86,152	80,821	82,025	77,895	76,891	70,789	78,973	79,994	81,841	
Production ...	88,312	84,821	79,697	80,491	76,419	75,180	69,724	79,062	80,296	83,156	
Arrears ...	19,835	16,299	14,387	19,625	23,469	26,743	20,927	16,449	16,048	19,076	17,355

Source : Cotton Control Statistics.

TABLE 23

COUNTS OF YARN USED BY THE MAIN GROUPS OF USERS : ANALYSIS BY COUNT GROUPS OF YARN LICENSED IN THE LAST YEAR OF THE WAR, EXPRESSED AS PER CENT. OF TOTAL

	WASTE YARNS		COTTON YARNS													Total	Per Cent.
	Un- spec.	-6 7+	Un- spec.	-9 10-16 17-20 21-26 27-32 33-37 38-48 49-80 81+													
Government Departments ...	—	6.4 2.8	—	2.4 23.9 14.3 11.9 5.4 2.1 7.0 17.5 6.3	100.0												
Industrial Groups ...	—	3.8 2.6	.3	7.7 25.9 10.8 13.0 7.3 12.0 6.1 7.8 2.7	100.0												
Canvasses ...	—	.1 .4	—	37.8 57.8 1.0 2.8 .1 — — —	100.0												
Civilian Home Trade ...	.2	7.4 11.4	.1	2.1 35.3 15.4 11.9 7.7 2.0 2.1 3.3 1.1	100.0											
Overseas Allied Requirements	—	2.3 3.0	.1	1.7 20.8 10.5 12.6 14.4 8.1 7.5 10.5 8.5	100.0												
Essential Home Services ...	3.8	11.3 11.6	.7	5.2 10.8 6.1 6.9 8.1 2.0 8.2 9.5 16.0	100.0												
Stock Replacement ...	1.0	3.5 3.7	2.2	5.7 28.9 14.8 12.3 7.2 3.5 6.2 8.2 2.8	100.0												
TOTAL ...	.3	4.5 4.6	.2	8.6 29.6 10.7 10.8 7.5 5.6 5.1 8.0 4.5	100.0											

Source : Cotton Control Statistics.

TABLE 24
EXPORTS OF COTTON YARN FROM U.K. 1939-1945
000 lbs.

	1939	1940	1941	1942	1943	1944	1945
Total	113,662	66,706	28,852	18,752	19,217	19,620	16,096
Eire	8,578	10,675	5,764	2,316	1,975	1,438	919
South Africa	2,796	2,837	2,079	2,016	3,741	4,289	3,930
British India	3,035	1,698	462	60	64	42	89
Hong Kong	1,252	705	142	3	—	—	—
Australia	5,947	6,825	4,026	4,235	3,415	4,999	4,432
Canada	4,446	5,759	5,411	4,609	5,017	4,892	3,948
Lithuania	2,467	502	—	—	—	—	—
Sweden	6,146	3,073	376	1	1	—	—
Norway	4,656	2,441	—	—	—	—	—
Denmark	4,841	1,225	—	—	—	—	—
Poland	1,626	—	—	—	—	—	—
Germany	19,740	—	—	—	—	—	—
Netherlands	13,990	4,640	—	—	—	—	—
Belgium	3,123	1,216	—	—	—	—	—
Switzerland	1,760	1,305	—	—	—	—	—
Roumania	2,995	5,657	—	—	—	—	—
Turkey	359	1,115	—	—	—	—	—
U.S.A.	1,289	913	1,958	1,212	538	37	21
Brazil	1,710	1,694	1,113	539	2,097	1,023	72
Uruguay	3,015	1,952	298	3	—	—	—
Argentina	4,884	3,917	897	228	12	—	3
			2,194	1,368	143	4	2

Source : U.K. Trade and Navigation Accounts.

TABLE 25
EXPORTS OF COTTON PIECE GOODS FROM U.K. 1939-1945
000 sq. yards.

	1939	1940	1941	1942	1943	1944	1945
Total	1,393,375	975,778	783,109	485,250	374,273	434,231	441,096
Eire	35,291	28,128	20,620	7,713	6,042	6,207	6,659
B.W. Africa	82,500	77,763	73,584	68,224	93,936	97,833	83,565
South Africa	129,325	106,603	93,923	84,169	39,974	71,826	75,512
Southern Rhodesia	15,332	12,134	12,134	10,107	6,983	19,142	12,658
B. E. Africa	3,967	6,013	10,586	3,948	3,170	5,838	8,835
British India	197,049	79,854	34,773	6,165	3,338	1,569	1,233
India (other) estimated	19,000	3,500	600	50	—	—	—
Burma	18,331	12,116	10,412	1,297	—	—	189
Malaya	29,279	31,676	13,466	1,141	—	—	4
Ceylon	15,709	9,493	4,853	985	581	325	1,203
Australia	142,661	181,617	121,201	87,540	73,773	98,440	95,620
New Zealand	36,295	48,998	47,262	34,077	39,547	45,924	42,615
Canada	76,160	28,627	44,262	38,792	27,188	9,989	8,070
B. W. Indies & British Guiana	30,052	20,611	17,500	9,482	12,643	9,293	7,646
Total : All British Countries	797,073	632,627	492,864	349,423	305,845	374,901	360,165
Sweden	27,982	11,095	827	503	16	—	23
Norway	22,107	9,179	—	—	—	—	468
Denmark	64,877	17,566	—	—	—	—	21
Germany	16,110	—	—	—	—	—	—
Netherlands	20,399	5,110	—	—	—	—	1,566
Switzerland	14,913	5,037	—	—	—	—	269
Greece	10,859	4,755	—	—	—	—	—
Turkey	6,731	11,590	888	—	—	—	—
Egypt	34,023	24,167	23,642	13,275	7,529	2,777	1,985
Fr. W. & Eq. Africa	12,021	6,497	28,849	11,668	699	170	3,287
Belgian Congo	1,867	2,052	5,184	5,742	11,365	14,446	21,883
Dutch East Indies	37,930	37,531	5,107	4,097	7,115	10,613	5,586
U.S.A.	12,051	8,734	104,538	20,766	—	—	—
Columbia	38,050	8,906	8,821	9,513	7,870	2,007	2,824
Venezuela	18,645	13,285	1,003	540	194	15	—
Uruguay	10,242	11,964	6,039	4,294	892	27	9
Argentina	123,860	88,719	8,198	4,538	11,526	81	51
			49,198	37,945		1,764	166

Source : U.K. Trade and Navigation Accounts.

The Distribution of Income Under Full Employment

THE DEFINITION OF PRIVATE INCOME

I doubt whether the generally accepted definitions of national income are those most helpful in assisting analysis of the post-war economic position. There are for instance two definitions adopted in the White Paper on National Income and Expenditure, 1938-1945,¹ which are becoming stereotyped. One is national income at factor cost which, split up in various ways, gives exceptionally valuable analyses of how our productive resources are being utilised in providing for personal consumption, for government requirements, for the increase of capital and, if it be gross national income at factor cost, for the maintenance of capital. It is not intended in this paper to criticise the conception of national income at factor cost, though it will be suggested that for some purposes government expenditure on goods and services might well be distributed in a way not at present done.

The other definition adopted by the National Income White Paper is one of private income which seems to me artificial and not very useful for economic analysis. It becomes more artificial with developments in direct taxation policy, by which the agreed book-keeping entry which records a person's income is often far removed from his true income, the receipts which activate his economic decisions. It might be argued that private income as at present defined does at least indicate the cost to the entrepreneur of persuading someone to engage in economic activities either as earner or lender. Cost to the entrepreneur is exceptionally important, and the need to measure it still remains even though the accepted definition does not measure the true cost of employing a person, if only because the employer has to pay part of the compulsory social

¹ All references to the National Income White Paper are to the addition presented to Parliament in connection with the 1946 budget. It is Cmd. 6784 and entitled "National Income and Expenditure of the United Kingdom, 1938-1945." In successive issues of this White Paper figures tend to be adjusted.

insurance contributions and numerous other expenses of employing people. This factor of social insurance illustrates the artificiality of the book-keeping definition of income by which part of compulsory insurance becomes direct tax paid by the earner and part indirect tax paid, ultimately, by the purchaser of the good or service produced. It is considered in this paper that all social insurance cash benefits ought to be considered as part of private income.

The artificiality of the accepted definition of private (and of personal) income becomes even more apparent when an extension of deduction of tax at the source is considered. Investors have been accustomed to this for a long time, but before the war earners, in general, received their earnings before deduction of tax, and their personal book-keeping entries would naturally show the gross receipts, subsequently to be offset by any compulsory tax payment as it was made. Thus it was possible to argue that a person's income included compulsory direct taxes. It was a gesture made by the State, but it is a gesture now no longer made in many cases. At present a person in keeping his personal accounts is expected to make an entry which is quite artificial for he has to add to his receipts a figure given by his employer as being direct tax payments, calling the sum of the two his income and immediately making an offsetting item of the amount he never receives. This article is a plea for the abandonment of this artificial practice and for a new definition of private income which would have greater significance. With this would go the need for differentiating, when considering the employment of some specific factor of production, between the incentive to the earner and the cost to the entrepreneur.

It is here suggested that a person's income is his net income after paying direct taxes, whether those direct taxes are deducted at the source or not. The distinctive feature of direct taxes is that they are compulsory in a way that indirect taxes are not. They can only be avoided legally by reducing one's income or by leaving the country. I am sure that it is this net income that determines a person's economic activities both in the fields of production and consumption and I suspect

that there is general agreement with this statement. A voluntary deduction which an earner agrees shall be made by his employer from his earnings is part of his income, though it is admitted that some payments (such as compulsory payments to organisations before a person can work at his profession or trade and possibly payments to superannuation funds) come very near to compulsion and may have to be examined carefully to decide whether they ought to be considered as part of income or not.

An advantage of this definition of private income is that it can be adjusted quite simply by some suitable index number of prices to obtain an indication of changes in the real value of income from year to year. Further, it seems to provide a more useful comparison of incomes of various groups of people, as suggested by measurements of the distribution of income into income ranges *after tax* as for example in table 13 of the National Income White Paper for 1938-1945.

The problem with regard to indirect taxes and subsidies is entirely different in character. There is no need to subtract net indirect taxes from personal income to arrive at true income. There is an element of choice as to whether a person pays indirect taxes on tobacco, beer and entertainments. Logically too, it may be considered that there is an element of choice whereby a person decides how much advantage he takes of the subsidies on bread, meat and potatoes, though analysis is complicated by rationing of many of the subsidised commodities. In every case the person buying these commodities, whether they are "taxed" positively or negatively considers that the value of his purchases is at least equal to their cost. Furthermore, changes in price which follow changes in indirect taxation can be, and are naturally, taken care of by means of the index number of prices.

Difficulties certainly arise with commodities that are effectively rationed, for the cost of purchases of such commodities to the purchaser is presumably lower than their value for he has to stop buying when the marginal value is still greater than the price. But this is a problem quite independent of the suggestions of this paper.

The ordinary index number can be made to allow for commodities which from being priced come to be distributed freely, possibly because of Government intervention. Thus so long as the volume of services rendered by doctors to non-panel patients can be measured the fact that the price "per unit" of service becomes nothing under the State health service can be allowed for in the index number by weighting the relative volumes with the earlier year value, or possibly half the earlier year value, and in consequence the real national income would not seem to fall simply because everyone now had free medical treatment. The index number would not normally allow for changes in the supply of free goods though an index number based on factor cost would do so if there were costs of production. But should index numbers allow for changes in the supply of free goods? If unrationed, the free good will presumably be bought until its marginal value is nothing; if restricted, the usual difficulties of valuing all supplies of rationed commodities arises.

One important example of indirect tax might be mentioned, primarily in order to say that it is a case of indirect and not direct tax. This case is that of local rates payable on property. The value of the house to the occupier is at least the rent plus the rates, if not he would leave. This example is comparable to that of the smoker who considers his cigarettes to be worth the cost including the tax. But this means that the value of services rendered by houses to the community is rent plus rates, not rent alone.

GOVERNMENT EXPENDITURE AND PRIVATE INCOME

It may be objected that this definition materially reduces private income by excluding war expenditure from private income and even the expenditure on goods and services by peace-time Government departments. Is not what is spent collectively on education, health, housing, trade, agriculture, etc., part of income in the same way as what is spent privately? For many purposes the exclusion of the full amount of direct taxation from private income, seems to be correct in principle though perhaps subject to errors in detail. If the exclusion

seems unrealistic there is always the estimate of national income at factor cost to indicate, for any period, the utilisation of factors of production for these various purposes.

Let us consider the war first and ask whether, for example, the production of, and free distribution of, bombs to the Germans ought to be included in national income. Incomes are certainly obtained from performing this function but that is different from calling the production part of national income. Ought it not to be argued that the cost of the war was a cost rendered necessary in order that our income could be maintained? It was a payment rendered necessary to prevent abnormal depreciation. Is not that a more realistic way of looking at the problem than the present method which considers that the war raised real national income, but not consumption? Similarly the peace-time maintenance of the armed forces is a payment necessary to maintain our standard of living comparable with expenditure on police. Presumably if armed forces and police did not exist, international and internal organisation would deteriorate and our standard of living would fall. In other words the cost of the war and the present cost of the armed forces and police ought to be subtracted from net national income at factor cost and added to allowances for depreciation and the maintenance of capital leaving gross national income at factor cost unchanged. Thus our net national income at factor cost tends to rise if we are successful in reducing the danger of war and the necessity of maintaining such large armed forces.

It is apparent when the Ministry of Food subsidises food, and the Ministry of Health, houses, that the purchaser of food and household accommodation so subsidised gets these commodities at a lower price than he would otherwise and the value of the Government expenditure is reflected in the price index. Now consider other departments, say the Board of Trade or the Ministry of Fuel and Power. Should not expenditure by these departments make trade easier or improve the supply or distribution of coal? Are they not performing functions that might otherwise be performed by the industries

themselves? In other words is not their function something akin to the granting of subsidies? Thus purchases made by the private section of our economy include in many cases value added by the work of Government departments such as the Board of Trade and the Ministry of Fuel and Power, though this value added is not included in the price. Similarly the employment section of the Ministry of Labour, and many of the functions of the Ministry of Agriculture and Fisheries are presumably intended to increase efficiency and the efficient utilisation of labour. In other words when national income at factor cost is being determined the cost of producing coal should include much of the cost of the Ministry of Fuel and Power, the cost of agricultural production should include the cost of the Ministry of Agriculture. The costs of the Ministry of Labour and of the Board of Trade should be distributed widely over industries, and similarly with much other Government expenditure.

Another type of Government expenditure on goods and services is the provision of education and health services. Education and health enable people to live a fuller life than would otherwise be possible, but this increase in the enjoyment of life is not of a kind that can adequately be measured economically. Appreciation of life and of art in its many forms is outside the usual conceptions of income—except in so far as it is indicated by expenditure on books, pictures and other forms of art. But there is another side to education and health, a side which has direct economic repercussions in that we expect expenditure on these things to show ultimately in increased production. Improved health services and increased vocational and technical education ought ultimately to show themselves in increased supplies of goods and services produced. If this increase is measured it involves double counting to include also the cost of education and health services. Thus education and health services ought to be considered as investments, but expenditure thereon not added to national income unless offset subsequently by a sinking fund when the increased production takes place, or by a depreciation allowance.

By a development of these arguments it seems that a reasonable interpretation can be put on this suggestion to subtract direct taxation from the accepted definition of private income. For convenience it will be called *net* private income to distinguish from the present definition which will be called *gross* private income. The new definition is complete in itself, it is easily understandable and capable of adjustment by means of index numbers so that comparisons over time can be made. It is not claimed that the definition is fundamentally different from definitions already accepted or that it involves any new assessments of economic theory or any modifications of economic analysis. Indeed estimates of consumers' expenditure, especially those adjusted for price changes, have much in common with the change suggested, whilst most of the discussion now taking place on incentive, on excess profits taxes and on investment and saving seems to make full allowances for the effects of direct taxation. But if practical discussion makes such allowances why should not the basic measure of private income be brought into line? The National Income White Paper, 1938-1945, gives the information needed for the new measurement and for an index number suitable for adjusting the money values. Besides Table 21, which gives private income, there is Table 14 showing direct taxation in respect of different types of income and property and Table 5 which gives an index of the volume of consumption. The third stage of what seems to be a logical process of linking the tables, in particular the subtracting of direct taxation from gross income seems to have been omitted (at least up to and including the 1946 issue).

ESTIMATES OF PRIVATE INCOME AND ITS DISTRIBUTION

The next task of this paper is to attempt to correct the omission. This is done in some detail for the two years 1938 and 1945; whilst some figures for the intervening years are given in a subsequent table.

The following table gives in summary form for 1938 and 1945 Table 21 of the National Income White Paper.

ESTIMATES OF (GROSS) PRIVATE INCOME AND OUTLAY
(£ millions)

	1938	1945		1938	1945
Investment income...	1,848	3,130	Expenditure ...	4,160	5,645
Earned income ...	2,913	5,778	Direct taxes ...	545	2,148
Social service income, etc. ...	270	343	Savings ...	326	1,458
Private income ...	<u>5,031</u>	<u>9,251</u>	Private outlay ...	<u>5,031</u>	<u>9,251</u>

In the above table investment income includes undistributed profits of companies and also such taxes as excess profits tax. Expenditure is valued at market prices, direct taxes include income tax due for repayment and consists of taxes paid, not taxes due. Earned income includes release payments to members of the armed forces, amounting to £125 millions in 1945—it might be reasonable to include some of this with social service income, etc.

The necessary adjustments can be made by reference to Table 14 in the White Paper with the exception of small unallocated amounts of direct taxation which leave an untidiness in the table below but are too small to modify the conclusions. Thus under the new definition the table would be altered to :—

ESTIMATES OF (NET) PRIVATE INCOME AND OUTLAY
(£ millions)

	1938	1945		1938	1945
Investment income...	1,437	1,673	Expenditure ...	4,160	5,645
Earned income ...	2,804	5,108	Direct taxes* ...	25	21
Social service income, etc. ...	270	343	Savings ...	326	1,458
Private income ...	<u>4,511</u>	<u>7,124</u>	Private outlay ...	<u>4,511</u>	<u>7,124</u>

* Direct taxes not allocated to a specific type of income. Ideally this item should disappear.

Taxes on property such as estate duty and war damage contributions have been assumed as paid out of gross investment income. No direct taxes are assumed to be paid on social service income.

Why is this second table superior to the first? The increase in money income is smaller, £2,613 millions instead of £4,220 millions, or 58 per cent. instead of 84 per cent. It will be shown later that the increase in money income recorded in the second table is due entirely to the rise in the price level. This ought to help to correct an impression that countries are better off in war than in peace. Further we are very interested in the proportionate distribution of income according to the economic function performed. The most obvious division is that between income from owning and income from effort. At the margin, as often in economics, the distinction is not clear, especially where a man uses his own capital in a business which he runs or directs himself. A distribution along the lines indicated has, however, been made in the tables above, together with a third class of income which comprises mainly what can be called social service income, that is income in cash from unemployment insurance and assistance, health insurance and old-age pensions and allowances. Certain other small allowances are also included. Now if each of these is expressed as a proportion of the total for each year and each definition of private income we get the following table :—

DISTRIBUTION OF PRIVATE INCOME

				Gross		Net	
				1938	1945	1938	1945
Investment income	...	...	...	36½	34	32	23½
Earned income	...	...	...	58	62	62	71½
Social service income	...	...	...	5½	4	6	5
				<hr/> 100	<hr/> 100	<hr/> 100	<hr/> 100

Even in 1938 direct taxes represented a greater proportion of investment than of earned income so that 36½ per cent. of gross income, and only 32 per cent. of net income, was investment income. The striking feature however of the table is that whilst gross investment income only fell from 36½ per cent. in 1938 to 34 per cent. in 1945 the net figure fell from 32 per cent. to 23½ per cent. Conversely gross earned income rose from 58 per cent. to 62 per cent. of the total whilst net earned income rose from 62 per cent. to 71½ per cent. In other words

the utilisation of the "net" definition of private income illustrates strikingly the change in the distribution of income in favour of earners and against investors which has been brought about, partly by cheap money and the rise in prices but largely by taxation policy, especially excess profits tax.

The next task is to adjust the figures of net private income for changes in prices. The best price index for this purpose can be calculated from the National Income White Paper for 1938-1945, especially by utilising table 5. The method of calculation involves an illogical treatment in the weighting of the index but the effect of this is likely to be small when compared with the effect of practical difficulties of constructing any price index. Such practical difficulties are illustrated by the necessity of deciding whether a four-page 1945 penny newspaper is dearer or the same price as a twenty-page 1938 penny newspaper and if dearer, then how much dearer. One suspects that the index assumes it to be unchanged in price.

The National Income White Paper, 1938-1945, shows :—

	1938	1945
Cost of producing commodities and services purchased out of private income in terms of 1938 prices	£3,602m.	£3,115m.
Therefore index of volume of purchases ...	100	86·5
Actual cost of producing those commodities and services in terms of contemporary prices	£3,602m.	£4,582m.
Add net indirect taxes	£ 558m.	£1,063m.
Therefore market cost of commodities and services bought out of private income ...	£4,160m.	£5,645m.
Index of value at market prices	100	136
Therefore index of market prices. (For 1945 the index is $136 \div 0\cdot865$)	100	157
Savings at current prices	£ 326m.	£1,458m.
Index of volume of savings (adjusted for changes in prices). (For 1945 the index is $1,458 \div 326 \div 1\cdot57 \times 100$)	100	285

Thus prices in 1945 were 57 per cent. higher than in 1938 and the figures of net money income should be deflated correspondingly to arrive at estimates of real income. This has been attempted in the following table :—

INDEX OF (NET) REAL PRIVATE INCOME							
1938 = 100							
						1938	1945
Investment income	...	...	...	...	...	100	74
Earned income	...	...	...	...	...	100	116
Social service income, etc.	...	...	...	...	...	100	81
Total (net) private income						100	100
Savings out of private income						100	285
Expenditure						100	86.5

Thus as defined in this paper the real value of private income was in 1945 approximately equal to what it had been in 1938. This is quite consistent with a decline of $13\frac{1}{2}$ per cent. in personal consumption as is shown when allowance is made for the increase in private savings. It is interesting to note that during the war, after deduction of direct taxation, and after allowing for the increases in indirect taxation and prices by means of an index number of prices that real earned income has increased. In 1945 it was about 16 per cent. higher than in 1938. In the same period the real value of investment income fell by 26 per cent. This is another way of looking at the change in distribution already commented upon, whereby in 1938 some 32 per cent. of income was investment income, but by 1945 that proportion had fallen to $23\frac{1}{2}$ per cent. In 1938 earned income represented 62 per cent. of the total, in 1945 it had increased to $71\frac{1}{2}$ per cent. (The balance in each case consisted of social service income).

It might be argued that net earned income increased because more people were earning whilst those earning were working harder and longer. This is true, but it should also be pointed out that much more was invested in 1945 than in 1938 because of the increase in the national debt and that therefore one would expect investment income to rise. The truth is that the policies of war-time were more effectively achieved by squeezing investment and by allowing earned income to increase. The person who has lent money for a long time at a fixed rate of interest can be easily squeezed by rising prices. The lender for shorter periods or the lender whose

loan is repayable can be further squeezed by low interest rates. During the war there were no risks to be taken, bankruptcies almost disappeared, so that there was no need to pay for risk taking. All kinds of investment income could, therefore, be squeezed by taxation. On the other hand earners had to be kept contented for, even with powers of direction over labour, the reward received remained the chief incentive, not fear of punishment in some form or other. Thus the full employment of war-time was associated with increased real income to earners and a redistribution of income so that earners received an increased, and owners a decreased, proportion. This increased real income to earners need not, and often did not, mean increased real income per unit of effort or per person, but as it was not associated with an increase in the number of households it meant an increase in real earned household incomes.

THE RELATION BETWEEN THE DISTRIBUTION OF PRIVATE INCOME AND EMPLOYMENT

We have to consider how far this increase in real earnings and how far this redistribution of income are essential features of full employment, how great the pressure will be to maintain the increased real earnings when there is a peace-time full employment policy in operation and how far the war-time redistribution of income will be expected to persist. If it persists will it permanently reduce real standards of living?

I cannot help feeling that for some time in the future a policy of full employment can only be effectively pursued if a greater proportion of national income than before the war is devoted to reward for effort, that is if earnings constitute a greater proportion than before the war. Yet, with our present organisation, employment will only be high if profits are high.

But what is meant by full employment policy? Many so-called full employment policies are nothing more than complicated exercises in "rule of three" obscured perhaps by the utilisation of technical terms. The argument, however, in effect runs approximately as follows :—

"With expenditure (purchasing power, income, real income) at x employment was y . If expenditure is increased to $x + a$ then employment will be increased to $y + b$ and the value of b will be such that $x : a = y : b$."

The policy will generally be considered sound if the theorist adds a footnote, usually very brief, to the effect that this assumes that prices and wages will remain constant. A good theorist might try to cover rising prices by saying that the measurements are made in real terms, but that if prices and wages rise the resulting totals would be higher without any significant changes in relative magnitudes. My objection to these mechanical exercises in arithmetic is that they are not applicable to Britain of the 1940's.

The reasoned full employment policies are primarily based upon the achievement of significant changes in relative magnitudes. They are nearly all based upon the possibility of increasing profits as a result of time lags, and this no matter in what technical language they are framed. Usually it is a lag in real wages behind prices that is relied upon to increase profits and hence employment. But earners are learning more about real wages and a policy which is successful over short periods with fluctuating prices may fail if it is applied persistently. A longer term lag which may increase profits for a long time is the possibility of redistributing investment income so that profits increase at the expense of those who hold long term claims to money and money income, that is at the expense of the rentier.

Full employment depends upon the actions of two groups of people who are associated in businesses for production. The interests of these two groups coincide in that both desire the maximum net output, but so far as each individual business is concerned, maximised in terms of money value rather than in terms of volume. But their interests diverge when it comes to the division of that net output. To be willing to employ up to full employment the entrepreneur desires profits, and it already seems to be agreed that he should be encouraged by the withdrawal of the excess profits tax. The employed on

the other hand have become accustomed to war-time distributions of output and may object strongly to an increase in the proportion going to entrepreneurs. Further they have become accustomed to earned income being 16 per cent. higher than before the war and may actively resist any reduction so long as employment remains high. In other words they may expect the reduction in earnings because of persons, mainly women, retiring from production to be balanced by reductions in taxation. It is doubtful if we can give the required additional incentive to the entrepreneur and still maintain real earnings at 16 per cent. or more above the pre-war level in view of our lost income from overseas assets, our failure to make adequate depreciation allowances during the war, our failure to increase our capital during the war, and our need to replace war-time losses. The problem of full employment is to find some means of reconciling the claims of profits and of earnings to the distribution of national income in such a way that there will be equilibrium at the full employment level. It is not simply a question of the artificial creation of purchasing power in the hope that time lags in making adjustments will provide the necessary windfall profits.

The pre-war problem of obtaining full employment was to be partly solved by cheap money, and it is now generally agreed that the volume of saving does not depend much upon the rate of interest. On the other hand stabilised cheap money is likely to meet resistances that cheapening money does not meet. During years of cheapening money investors are more than content because of rising capital values. Thus every time the rate of interest is reduced the wealth of the capitalist is increased, so for a time both the payer and the receiver of interest are satisfied. But this all round satisfaction does not persist after interest rates are stabilised and with redeemable stock the capital gains are gradually lost. It is then that dissatisfaction is to be expected from the rentier and in the long run it might be found that the rate of saving is not uniquely correlated with income. This may happen if rentiers start living on, first their capital gains, and then their original capital.

At present, however, the big problem of reduced interest rates is not a reduction in the volume of savings but the distribution of those savings to those who want to borrow. The free society method was to distribute the savings to those who could pay the most (with due regard to security), which usually meant to those who could use them most profitably and incidentally provide most employment by their use. In pursuing the cheap money policy therefore and desiring to encourage full employment the Government might well consider borrowing all savings at a low rate of interest and hiring out to the highest bidder, with due regard to security, thus encouraging high employment without making unnecessary payments to savers who save without the incentive of the high rate of interest. Unfortunately, from the full employment point of view, it appears that, whilst the Government intends to continue a cheap money policy, it intends to re-lend according to assessments of social priorities. Thus it intends to lend money cheaply for the building of houses, yet it limits the profits to be obtained by building houses by means of maximum prices and then rants at private enterprise because it employs labour in more profitable repairs rather than in building new houses. The real problem at present of the cheap money policy is, therefore, the problem of the distribution of the savings made and the prevention of a "black market" in savings.

If it is concluded that cheap money does not provide sufficient both to give entrepreneurs adequate profits to provide full employment, and earners whatever rewards they will demand under full employment, there is another policy which might be tried. It might be argued that during the war the Government took over the function of entrepreneur and took the reward due to those who perform that function in the form of increased direct taxation of investment income, so making possible the increase in net earned income and the decreased (real) net investment income. This policy might be continued officially in the nationalisation of industries whereby the function of risk bearer is performed by the Government at a cost to the community lower than before the war.

This policy is risky. Nationalisation of a few industries in a community with a controlled distribution of capital has serious practical difficulties. I have no doubt that in time a nationalised coal industry will produce more coal and may produce it by increasing output per man shift ; it may even produce it more cheaply in terms of real total cost. But this may not indicate the success of nationalisation, it may simply indicate that an undue proportion of savings has been diverted to the supply of new capital for the coal mines. Thus there is more danger in having one industry than in having many nationalised, because in the latter event there is a greater chance of the need for balanced development being acknowledged. The success or failure of nationalisation will not be indicated in the output of the nationalised industry but in whether the Government takes over the functions of the entrepreneur more cheaply than private enterprise so that a greater proportion of national income can be distributed to earners. In other words nationalisation will be a success, will help to create full employment, if it enables our economic system to continue the redistribution of income and the increase in real earned income that has taken place in the full employment of war-time. Personally I should have greater faith in the prospects of such success if nationalisation stocks were considered to be undesirable stocks to hold. That they should be considered desirable stocks is an indication that there are reasonable expectations of an unchanged distribution of investment income after nationalisation when changes are allowed for in the risk factor.

SUMMARY

The war-time success in obtaining full employment has been accompanied by a redistribution of income in favour of earners who in 1945 received $71\frac{1}{2}$ per cent. of private income after subtracting direct taxes, as compared with only 62 per cent. in 1938. Most scientific full employment policies, in stressing the importance of increasing profits as a means of increasing employment, propose policies which mean that earners receive a smaller, not a larger, proportion of total

income. The question now arises as to whether an increased proportion of income distributed to earners is not an essential feature of full employment and whether hitherto full employment policies have attached insufficient importance to the need for increased earnings. Thus it may be that a redistribution of income in favour of earners is an essential feature of any long term full employment policy in a society of free workers, especially in a post-war Britain recovering from the losses of war.

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PRIVATE INCOME IN THE UNITED KINGDOM, 1938-1945

	1938	1939	1940	1941	1942	1943	1944	1945
Gross private income (Cmd. 6784) £Mn.								
Investment ...	1,848	2,018	2,361	2,663	2,881	3,032	3,119	3,130
Earned ...	2,913	3,100	3,707	4,373	4,874	5,274	5,530	5,778
Social service, etc. ...	270	261	267	283	294	317	345	343
TOTAL ...	5,031	5,379	6,335	7,319	8,049	8,623	8,994	9,251
Net private income £Mn.								
Investment ...	1,437	1,568	1,757	1,694	1,797	1,674	1,655	1,673
Earned ...	2,804	2,976	3,550	4,135	4,459	4,740	4,897	5,108
Social service, etc. ...	270	261	267	283	294	317	345	343
TOTAL ...	4,511	4,805	5,574	6,112	6,550	6,731	6,897	7,124
Distribution of net private income								
Investment ...	32	32½	31½	28	27½	25	24	23½
Earned ...	62	62	63½	67½	68	70	71	71½
Social service, etc. ...	6	5½	5	4½	4½	5	5	5
TOTAL ...	100	100	100	100	100	100	100	100
Saved ...	7	11	19	22½	23½	24	22½	20½
Spent ...	93	89	81	77½	76½	76	77½	79½
Index number of market prices ...	100	103	120	136½	146	154½	155½	157
Index of real net income								
Investment ...	100	106	102	87	86	75	74	74
Earned ...	100	103	105	108	109	109	112	116
Social service, etc. ...	100	94	82	77	74	76	82	81
TOTAL ...	100	104	103	99	100	96	98	100
Saved ...	100	153	269	306	321	325	306	285
Spent ...	100	100	90	83	82	79	83	86½

Variety Among the Planners

In an economy where the functions of the State are limited economic relations are impersonal and individual decisions are made by reference to a framework of prices. A mechanism of this kind cannot be substantially influenced by any one individual. Its study is in the nature of a science. In a community subject to an "overall economic plan" economic analysis is more diffuse and less scientific. An overall plan implies that, in the last resort, one man, or a few, make the decisions for the many. The personal opinions, idiosyncracies or even prejudices of the Supreme Planners may then become of great importance in determining the form and purpose of the economic system. There may be many different suggested plans since planners tend to be strongly individualistic.¹ The varying conceptions of the overall plan may thus lead, particularly in the early stages of its development, to significant conflicts of ideas. The objective study of this important social process is, perhaps, not primarily work for the economist. It would seem to be more properly the task of the student of administration or of the psychologist. The economist may, however, be able to make some minor contribution. In this article an examination is made of the recent utterances of public men regarding the overall plan to which the British economy is now being subjected. The purpose is to try to make a rough classification of contemporaneous views of overall planning in order to open out the field for later workers. The article, of course, does not concern itself with the merits or demerits of overall planning as such.

There seems little doubt that the members of the British Government believe that they have created, or are in the process of creating, a centrally planned economy. They frequently

¹ Planners often complain that their opponents are discussing not their kind of planning but somebody else's. Mr. Durbin, in the *Economic Journal*, December, 1945, takes Professor Hayek to task because the Professor bases his understanding of "economic planning" only upon modern references to students of government and sociology and such socialist economists as Marx, Engels, Shaw and the Webbs and ignores the writings of "those of us who are now both practicing economists and also socialists."

speak of the social and economic revolution through which we are passing. They contrast the British type of economy with that found in the United States. Mr. Attlee has put this point beyond doubt by his declaration that "in matters of economic planning we agree with Soviet Russia."¹

I

Perhaps the most important question to ask about an overall plan is this : does it express a purpose, something which the planners intend to make happen ? Or is it something far less substantial than that, an estimate of what might happen, a prayer for what ought to happen ? The fundamental difference between these two approaches has been well put by Monsieur Stalin.² "Admittedly they (*i.e.* under the capitalistic system) too have something akin to plans. But these plans are prognosis, guess plans which bind nobody, and on the basis of which it is impossible to direct a country's economy. Things are different with us. Our plans are not prognosis, guess plans, but *instructions* which are *compulsory* for all managements and which determine the future course of the economic development of our *entire* country. You see that this implies a difference of principle." Into which group does the British plan fall ?

Although a close examination of their own words suggests that there are very subtle, not to say perplexing, nuances between the ideas of the Supreme Planners, at least six main conflicting strands of thought are to be discerned in current discussions. This classification cannot, of course, be water-tight : some Ministers, indeed, seem to belong to more than one group. In any case, the vocabulary of planning has now become so opulent and varied as almost to defy the efforts of the neat cataloguer.

PLANNING WITH A PURPOSE

There are first the planners with a purpose. They believe, with Monsieur Stalin, that men are masters of their economic environment, that they can lay down in advance what should

¹ House of Commons, 18th November, 1946.

² Quoted from Baykov "Soviet Economic System" p. 424.

happen and then proceed to make it happen. Sir Stafford Cripps is perhaps the leading figure in this group. He has said ¹ "I was delighted with the general measure of agreement that we should plan, and having a plan that we should try to carry out the plan." He is anxious to follow the Russian model and get the kind of results achieved in Russia although, of course, he would not wish to use the hideous suppression of human rights which have been employed in the Soviet Union. He has said ² "The truth is that we as a Government and as a nation, have set out upon what most of us always realised was a new and difficult task: we are attempting, without the extreme compulsions of totalitarianism, to plan and organise our production so as to give a higher and more equal standard of life to our people. The fact that we do not apply extreme compulsions means that it will take rather longer, but the delay is, in our view, well worth while if we preserve our democratic freedom as we are determined to do." It is to be noted that this sort of planned economy leaves one very important question unanswered. What is to happen if we fail in the difficult task? Will we scrap the policy of overall planning or will we get rid of democratic freedom?

The significant point about planning with a purpose is that, once the plan has been set, then the Supreme Planners tend to fall into the frame of mind in which they are prepared to make any "sacrifice," or more exactly force any "sacrifice" on others, in order to achieve the plan. So that a plan laid out for promoting the interests of the consumers often leads to the deliberate and implacable sacrifice of those interests. This could only be regarded as logical if the attainment of the plan, independently of the economic consequences of fulfilling the plan, were regarded as an end in itself. Broadly speaking, any plan which calls for "sacrifices" should be subject to suspicion since the purpose of a plan (except perhaps in the case of war or threatened war) should be to lessen sacrifices and not increase them. A very pertinent illustration of this point is provided by the recent campaign to raise our exports

¹ House of Commons, 26th February, 1946.

² House of Commons, 21st November, 1946.

to 75 per cent. over pre-war levels. That figure saw the light of day as a rough estimate of the export target we must reach if we were to enjoy the pre-war standard of living. But in the minds of the planners with a purpose it is rapidly becoming a target to be reached for its own sake even if, in order to attain it, we have to cut down our standard of living below the level it might reach with a lower level of exports. A close analogy would be that of a relieving force which sets out to bring food supplies to a besieged and starving garrison. The relieving force meets unexpected difficulties and is compelled to consume both its own food and that intended for the garrison. But with blind courage the relieving force presses forward and gloriously reaches its objective but only, of course, to add to the sufferings of the garrison by increasing the number of people to be maintained on the garrison's depleted resources.

GUESS PLANNING

The second group of planners, to employ Monsieur Stalin's phrase, are the guess planners.¹ They recognise that events will be determined by forces at least partly outside their control. They are interested in what is likely to happen in the future but they recognise the fallibility of economic forecasting. Mr. Attlee, himself, seems to fall into this group. He has said "although we may have to plan without having all the data, it is better than having no plan at all. We must make some kind of economic forecast."² So long as the guess planners do nothing which binds anyone, their activities are of no great significance. But the state of being a guess-planner seems to be a highly transitional one. For if their prognosis

¹ Some authorities prefer to describe this as "wish" planning or even "dream" planning. Actually the most striking cases of wishful thinking are found not in Great Britain but in other countries. Thus in the French "Monnet" Plan enormous increases in productivity per head are wished into the plan. The Czechoslovakian plan is based upon the unlikely assumption that very large foreign loans will be available. A recent interesting case of "wish" planning in Great Britain was revealed when Sir Stafford Cripps announced on 13th January, 1947, that the allocations of coal to industries would be roughly halved but that this would not necessarily reduce the amount of coal which would actually be received since the old allocations had been on an "unrealistic" basis.

² House of Commons, 26th February, 1946.

is a gloomy one the guess-planners are easily led on to try to avoid by positive action what they believe, rightly or wrongly, they see in the future. If their prognosis is favourable they will be tempted to try to bring about the desirable conditions much earlier than they could normally be expected. Indeed it seems to be a general working rule among many planners : "find out what is going to happen and then make it happen more quickly." In both cases guess-planning is transmuted into planning with a purpose.

FLEXIBLE PLANNING

The third group are the flexible planners. They attach great importance to keeping the plan so flexible and altering it so swiftly that reality will never falsify the plan. Thus Mr. Dalton has said ¹ "These plans must not be mere essays. They must be consistent with practical possibilities. They must not be too rigid or hidebound. They must be capable of continuous adjustment in the light of changing conditions. We shall never be able to sit back as some planners imagine and close our eyes and let the plan take charge, like one of the automatic pilots in an aeroplane : . . . Eternal vigilance is the price of successful planning." This type of planner may easily become a menace to logical thought because, if he is successful in changing his plans sufficiently quickly to fit the facts, then he comes to believe that he is controlling the economic system when he is really controlling only the statistics in his own plan. This wastes effort just as it would be wasted by a man who took great pains to keep his watch scrupulously correct so that the movements of the sun should not be held up.

OPPORTUNIST PLANNING

Fourthly there is a group which may be described as opportunist planners who, whilst continuing to claim merits for the overall plan, would use the plan sporadically, dodging in with the plan from time to time and place to place as opportunity suggested. Mr. Bevan is perhaps the chief exponent of this technique. In dealing with the building of

¹ House of Commons, 5th February, 1946.

houses he has expressed himself strongly against the use of "programmes." On various occasions he has said: "I am not going to do any crystal gazing. We have had too many programmes. It is time we had houses."¹ "I refuse to give a target because I am content rather to rest upon performance than promise."² The people of this country do not want promises which can only be based on guesswork . . . Long term national targets in the form of figures give no psychological stimulus."³ This form of planning must be very attractive to Ministers who have a specific administrative task to carry through. If there is no target they cannot then be challenged on their achievements. One refinement of this method is to plan all the resources which go to the making of the final commodity but not to plan the output of the final commodity itself. Thus Mr. Bevan: "The Government hoped to be able to produce at the end of each month . . . a full statement of the production of building materials . . . Having provided the industry with the materials the labour and the contracts, it would be the responsibility of the builders to answer the critics . . . It would then no longer be the Government who would be the Aunt Sally—it would be the industry."⁴

PLANNING THROUGH DISLOCATION

There is fifthly, a group of thinkers who would appear to push opportunism to the point at which they deny the very

¹ House of Commons, 17th October, 1945.

² House of Commons, 30th July, 1946.

³ Reported in the *Observer*, 22nd September, 1946.

⁴ Reported in *The Times*, 21st November, 1946. Since the above was written Mr. Bevan has produced his "Housing Programme for 1947" which strongly suggests that he has graduated into the guess planning group. "The rate of building will be reduced if it proves impracticable to obtain increased imports of soft wood timber. It has not been thought right, however, to lower the estimate on account of uncertainty in regard to a single factor." But he then goes on (para. 14) to say that "production during 1947 is dependent upon *many* (my italics) uncertain factors . . . the supply of fuel . . . the recruitment of further labour . . . the possibility of finding alternatives for certain scarcer raw materials." It is interesting to note that on the very day that this Housing Programme was produced, showing that the output of houses depended on the production of coal, Mr. Isaacs, in the House of Commons, was saying that the use of Polish miners, which would help to determine the output of coal, was dependent upon housing. This suggests another possible group of "vicious circle" planning.

purpose of the overall plan. Whatever disagreement there may be on other points, most people would consider it axiomatic that an overall plan should strive so to distribute national resources that the efforts of the different co-ordinated pieces of the system would fit snugly together. The different flows of raw materials, labour and capacity should be adjusted so that the pre-determined flow of consumers goods should issue without stoppages or wastage at any point. But some planners seem positively to welcome the waste of "bottlenecks" (*i.e.* of shortages of supply of one thing in relation to others) and indeed to consider that the plan makes this inevitable. Thus Mr. Morrison addressing the Labour Party Regional Council at Leeds on 30th November, speaking of the many bottlenecks in the economic system said "it is not at all my view that this array of bottlenecks is a cause for gloom or discouragement. On the contrary, the fact that we see so many bottlenecks is evidence that we are expanding our economy. Let us be realistic and recognise these bottlenecks not as reasons for alarm and inertia but as challenges to our resource and initiative . . . In a full employment world where the bad old practice of wasting plant and labour and materials is frowned upon, we must expect that the higher level of demand and the fuller use of resources will constantly thrust this bottleneck problem upon us." But if, as is indicated above, "the bottleneck problem" is simply the problem of having to waste one lot of resources because they have not been properly matched in the plan with other sets of resources then it would seem that there is little to choose between the bad old world and the brave new world.¹

¹ The *Manchester Guardian* has perhaps given the most enthusiastic welcome to the policy of "Strength through Shortages." This will be found in the leader of 1st August, 1946. Speaking of the policy of house building they say: "The Minister's chief concern must be to allow (or stimulate) just so much building that the demand for materials and components will press closely, but not to the stalling point—on a supply that is as copious, well balanced and steady as good organisation can make it. Whilst this supply remains inevitably smaller than *the available labour and management capacity could handle* (my italics) there must always be a critical shortage of one component or another." That is to say, the plan must tolerate the inadequate use of labour and managerial capacity in the building trade in order to provide a stimulus to the expansion of the supply of building materials. Surely a plan, should strive to avoid bottlenecks, not to create them

This point can perhaps be made clearer by taking a parallel case in an ordinary business. If a business man planned his production, acquired his labour, machines and raw materials and then discovered that, unfortunately, he could not operate because he had forgotten to acquire a supply of lubricating oil, we should naturally consider this as a breakdown of his planning. Any attempt at robust blustering on his part that "this kind of thing is inevitable" would properly be looked upon as pure make-believe. But when national overall planners make such mistakes we are expected to welcome the dislocation as evidence of the expansionist tempo.

There is a second point in Mr. Morrison's statement which seems to defy the principles of elementary economic logic. A "bottleneck" is the item which ultimately is holding up everything else. That is to say there cannot be several bottlenecks simultaneously because there cannot be several items all in shortest supply at the same time. A man who is mixing mortar cannot be shortest of cement and sand at the same time. When Mr. Morrison speaks of simultaneous bottlenecks in man-power of all kinds, raw materials, coal, electricity and gas, he can only mean either one of two things. Either that the plan has been drawn up in defiance of the facts upon which the plan should have been based, that the plan is far too large to be carried out. Or that whilst there is an adequate supply in total of (say) raw materials they have been distributed to the wrong points, *i.e.* that the distribution side of the plan has broken down. In neither case does there appear to be cause for self congratulation.

FREE PLANNING

Sixthly, there is a group perhaps best described as free planners, partly because they contemplate the possibility that the plan may leave room for some private enterprise, partly because they intend that the plan should be approved by the whole community, partly because they emphasise the need for planning for "freedom." Mr. Morrison, for example, has said that : "if only nationalization will secure the results required then we must nationalize. But if private enterprise can do it,

well then let private enterprise remain." "We in Britain stand for free planning and in planning for freedom."¹ This is strangely at variance with the views of those planners who squarely recognise that planning involves a risk to freedom but think the risk worth taking. It will be interesting to watch the elaboration of the technique of planning for freedom. Clearly it is still in an embryonic state.²

II

Another main bone of contention between the planners is the form that the plan should take. Most planners think of it as a very large document (similar to the fat volumes embodying the various five year plans of the Soviet Union) which would lay down in detail the output of each commodity and would prescribe the allocations of raw materials, capacity and labour for each specific final commodity. This would go along with a group of *physical controls* exercised by the State which would steer resources into the correct channels. That is to say there should be a plan continuously controlled in detail. Sir Stafford Cripps appears to hold this view.³ "Our objective is to carry through a planned economy without compulsion of labour. The general idea is that we should use a number of controls in order to guide production into the necessary channels, according to the plan we have formulated. The principal controls will be financial, including price control and taxation, materials control, building control, machinery and exports control." Sir Stafford, however, seems recently to have been changing his ground somewhat, perhaps because of a growing realisation of the administrative impossibility of co-ordinating a mass of physical controls. On 21st November, 1946, he said in the House of Commons: "... a great many controls have been removed ... This process is continually

¹ Reported in *Manchester Guardian*, 18th October, 1946.

² Thus in 1946 the Government took the whole nation into its confidence regarding the need for exports. But, unless I have missed something, the Government did not consult the citizens about the distribution of the national income between consumption and investment—which is generally regarded as the crucial planning decision.

³ House of Commons, 26th February, 1946.

going on and will continue until we have been able to get rid of a great many in the future." He thought that "if all these controls were to be removed in the present circumstances, there would be a completely chaotic situation." It seems, however, that he is putting increasing emphasis on the planning of the distribution of man-power as the fundamental instrument of planning. On the same occasion he said: "the planning of the choice of products . . . carries with it the planning of the distribution of man-power." The same idea seems to have been in the mind of Mr. Marquand, Parliamentary Secretary to the Board of Trade, who is reported as saying on 29th October, 1946: "there are limits in which detailed State intervention give you no long-term advantage. You can dispense with the intervention of officials so long as you can lay down a broad economic plan."

To try to carry out an overall plan through the allocation of man-power is to employ the crudest of all weapons of control. For labour control is the most intractible of all the physical controls. No compulsion is to be exercised over labour.¹ How then is the labour to be distributed in the proportions necessary to implement the plan? Sir Stafford Cripps argues that we must "persuade and induce" labour into the right channels. But how precisely? Differential wages, which most people would regard as the main inducement, he is doubtful about. "They (the British people) deserve and need reasonable remuneration for their work . . . But beyond that it is good working conditions and team work that will produce the results we want. The idea of an ever rising spiral of inducement wages is one which makes me shudder at the economic consequences that might come."² There seems here a danger that detailed planning through the physical controls may become somewhat flaccid and mean very little more than competition between industries in shortening hours (which

¹ Sir Stafford Cripps, House of Commons, 26th February, 1946: "no country in the world, so far as I know, has yet succeeded in carrying through a planned economy without compulsion of labour. Our objective is to carry through a planned economy without compulsion of labour."

² House of Commons, 21st November, 1946.

might also lead one to shudder); a drive for works' canteens, etc., and vague exhortations to pull together.

If the central plan is to be based on a detailed man-power budget and no labour compulsion is to be tolerated another dilemma immediately arises to which no public answer seems yet to have been given. Is the plan to be based on the labour allocations which the supreme planners regard as ideal? Or is it to be based on labour allocations which are regarded as practicable in view of the "stickiness" of the labour supply. If the former then the plan becomes a pious aspiration, if the latter then somebody will have to make an estimate of the probable effect of Government propaganda. For example, if the Minister of Supply believes that another 20,000 foundry workers are vitally necessary and he starts a drive to get these workers (without using the incentive of "inducement-wages") will the plan assume that he will or he will not get these workers for the foundries? How are such estimates to be made?

III

Unfortunately just at the time when Great Britain is embarking upon an overall plan under the guidance of a group of thinkers who favour *a* plan and the instrument of physical controls for carrying it through, another group, the real intellectuals of the planning movement, are cutting the ground from under the feet of the first by attacking the idea of *a* plan, sometimes on the grounds that it will not work, sometimes because they fear the destruction of democratic liberties in the process. Mr. Durbin, for example, has stated quite specifically: "Planning does not in the least imply the existence of *a* Plan—in the sense of an arbitrary industrial budget which lays down in advance the volume of output for different industries."¹ Other thinkers in this group such as Mr. Lerner² have swung even further from the old line and would seek to combine the benefits of the capitalist economy and the collectivist economy in a sort of "mixed" economy. But they **all** contemplate a system in which the State would make a few

¹ *Economic Journal*, December, 1945.

² "Economics of Control" p. 1.

major economic decisions and, thence forward, the distribution of production factors would be carried out by a socialist "pricing system."

Theoretically, many of the logical and administrative problems bound up with central planning can be avoided by the use of a price system operating within a framework of major economic decisions by the supreme planners. Progressively intricate discussions on this subject are now going on among the economic experts.¹ It is not to be assumed that they have yet reached agreement or that their findings prescribe practical measures for the running of a controlled economy. In particular, they appear to ignore, in their theoretical working models, most formidable problems associated with incentive. But they are all agreed, as far as I can understand them, on two points: first, that the price mechanism must be allowed to operate sufficiently extensively to leave to the individual a great mass of detailed decisions which the old fashioned planners now in charge in Great Britain would leave to the State; second, that the consumer must be free to distribute his income as he wishes and that the productive system must be free, within the framework of the major economic decisions, to adjust itself to the consumers' wishes. Whether the ingenuity of the academics will ever produce a scheme of thought which will provide a solid basis for practical policy only time can decide. We certainly need not hasten to implement their findings until these have reached a more advanced stage of precision and are more widely accepted.

Even if they ever do reach final agreement their ideas will be obstructed first by the inherent attraction of planning through the physical controls mentioned above and second by an almost pathological dread among many of the older type of

¹ See Lerner "Economics of Control"; Meade, *Economic Journal*, April, 1945; Wilson, *Economic Journal*, December, 1945; Fleming, *The Manchester School*, September, 1946.

planners of the working of the price system.¹ This in itself is causing a great deal of confusion. The two main functions of price movements are to bring about necessary changes in supply and to distribute goods among potential consumers. But Mr. Strachey, the Minister of Food, for example, seems to reject both these functions. On 19th August, 1946, speaking of the Wheat Agreement with Canada, he is reported as having said: "he had been criticized on the ground that in two or three years the price of wheat might have dropped. Even if there was a great slump in wheat prices again he said, quite frankly, that they could buy from the Canadian farmers too cheaply. If they got their wheat from them at the price of sawdust, the Canadian farmers were ruined, which was not a very nice or fraternal or good thing." (Incidentally it may be noted that the Ministry of Food has fixed prices for Danish agricultural produce at a level which, the Danes allege, involve losses for the Danish farmers). Mr. Strachey further rejects the price mechanism as a device for rationing (without coupons, queues or black markets) the available goods between consumers. In the House of Commons on 18th July, 1946, he described a rise

¹ The head-on conflict of principle is perhaps seen most clearly in the application of the marginal principle. Thus the modern planners insist upon the importance of the rule that marginal cost should equal price which, in cases of increasing returns, would imply that a concern as a whole would run at a loss. But the old-fashioned planners who were responsible for the recent bill to nationalise the British transport industry will have none of this. They assert (Clause 3) that the enterprise must cover its total costs.

It would take us too far afield to examine the causes of the psychological suspicion of the price system. But, undoubtedly, it is closely bound up with the irritation felt by those who like to think in terms of the "broad national interest of the well-being of the community as a whole," when they are confronted with the controlling influence of economic costs. Sir George Schuster (*Observer*, 8th December, 1946) has spoken most frankly on this point. Dealing with the Lancashire Cotton Industry he advocated a bold policy of re-equipment and went on "many firms have their machinery written down to very low figures on their books and, taking into account the cost of capital charges for interest and depreciation on new machinery, it may well be doubtful for an individual firm whether it will pay to put in new machinery. But we must export to live. If we could double the volume of production, even with a slightly higher cost of manufacture, it would be to the national interest to do so. It is, therefore, a case where . . . the State must intervene for the sake of the community." It is, however, difficult to see how exports can be increased, over any significant period, by increasing costs or how the community can gain by using resources to make new equipment as a result of the use of which costs would rise.

in the price of bread as the traditional method of rationing such a commodity. He indignantly rejected the idea that the Government would resort to it. He is reported on 27th October, 1946, referring to the varying consumption of meat, eggs, butter and milk by rich and poor people before the war, as saying: "that was rationing all right for the poor family. It was the most vicious, pernicious, vilely unfair kind of rationing that you can imagine—rationing in which the rich got three times as much as the poor. That is the kind of rationing to which we will never go back." Now, unless Mr. Strachey has in mind a policy of completely equal distribution of income (which it is difficult to imagine is the case in view of Government policy regarding the salaries of Ministers, M.P.'s, officials of Public Boards, etc.) this must mean that he regards "rationing by income" as inconsistent with his conception of a planned economy. If this is really correct those who are working on the possibility of a "socialist price system" are wasting their time.¹

There is, indeed, a curiously close association, in the minds of many people, between "overall planning" and equality in the distribution of income. This in itself raises questions which few seem yet to have considered. If income is distributed equally, through what processes will labour be properly disposed over the various industries? If, on the other hand, income is allowed to be unequally distributed what would be the purpose of it if consumers are not permitted to buy unequal quantities of goods?

IV

There are other directions in which British Ministers have not yet achieved the lucidity of thought and singleness of purpose which undoubtedly they are striving for and which is essential if the ordinary citizen is ever to understand what it is

¹ There are many other instances of the belittling of the function of prices. Thus Mr. Shinwell in the House of Commons, 9th October, 1945, announcing the shortage of petrol which prevented him from increasing rations was asked why, in these circumstances, he had recently reduced the price of petrol. He said "petrol rationing is a distinctive question with nothing whatever to do with the price level."

he is being asked to approve. There is space here to refer only to two of the most important. Mr. Bevan apparently thinks of planning in terms of a technique which no other Minister has mentioned. He prefers to have *two* different plans at one and the same time—a plan built up out of “programmes” and a plan built up out of “targets.” “The building industry was now entitled to receive a clearer picture of its future prospects and he intended to invite the leaders of the industry to meet him and hear what the Government’s programme was likely to be. It has been impossible for him in the first year to provide the industry with a target; but there was all the difference in the world between a target and a programme. The industry was entitled to expect from the Government an estimate of the flow of materials it could have in 1947, the number of houses it could build, and an estimate of the labour force that would be available. It would be foolish to regard that as a target because there were a number of things which were still doubtful.”¹ Does this presage a double plan, a plan-within-a-plan? If so, all the problems of the scientific co-ordination of the plans become enormously increased.

There is a similar suggestion that one plan is not enough in Sir Stafford Cripps’ speech in the House of Commons on 21st November, 1946: “Planning is, of course, only one part of the general scheme. Side by side with it goes the question of the tackling of those major industrial difficulties which private enterprise has proved itself wholly unable to tackle in the past; such as, for instance, the coal-mining problem, the transport problem, the problem of power and light and heat, and so on.” This seems to mean that “planning,” the nationalization of industries and the attainment of efficiency are independent things. “We want to get an integration of partnership between the Government as the overall planners and the employers in industry as the executors of the plan, whether the employers happen to be a national board, as in the case of coal, or private employers, as in the case of cotton.” This suggests that planning and execution are two different things, that a policy is framed and then, only after that, is the

¹ Reported in *The Times*, 21st November.

attempt made to determine whether it can be carried out. More light is urgently needed on this point since, to the superficial observer, it would appear that the important element in planning has here been omitted and that the relation between thoughts and deeds is being left to the blind ravages of chance.¹

V

These fundamental confusions about domestic economic policy are naturally leading, particularly among the planners, to anxiety, impatience and criticism and thus are tending to undermine public confidence. It is probable in the past that all economies with an overall plan have suffered in this respect. But in these cases, as Sir Stafford Cripps has rightly observed, their teething troubles have been eased by the employment of "the extreme compulsions of totalitarianism." In Germany and Russia it was quite logical and proper, so long as the attainment of an overall plan was regarded as possessing over-riding priority, to stifle the critics and murder the recalcitrants. Where free speech and respect for other human rights still obtain, the embarrassments to the establishment of the overall plan may be serious or even decisive. Under such conditions the danger to be feared is that of a growing disillusionment with the overall plan. This disillusionment may be expected to pass through three stages.

First, the more robust believers in planning begin to criticize the existing form of planning and to call for their own particular ideas of planning to be put into operation. This is already beginning. Mr. Tanner,² the President of the Amalgamated Engineering Union, has advocated an "Engineering Advisory Board" with a full-time chairman

¹ At the time of going to press another type of planning is to be observed—"planning on the past." Thus Sir Stafford Cripps is reported as saying on 22nd January, 1947: "in the first instance our aim was a normal peaceful existence with the average standard that we had in 1938 to be attained as rapidly as possible, but that average to be more equitably spread among all the people." Planners are inclined to pride themselves upon looking forward but when they get into serious difficulties they are often disposed to clutch at the past for guidance. This, however, does not really help them since the problem remains of how to decide whether future conditions really justify the nostalgic determination to re-create the old conditions.

² In a letter to the *Times*, 9th November, 1946.

and staff which would have day-to-day contact with departmental officials and provide the closest possible link between those with executive responsibilities and those engaged in the industry whose practical advice and co-operation are indispensable. He went on "this reciprocity would transform planning from the *present rather vague and academic exercise* (my italics) into a practical technique to get more of the right products in the correct order out of an engineering industry purposefully shaped more fully to meet national requirements."

Every planner, not at the centre, sees his own industry as the "basic" industry which should be put right first so that everything else may follow in proper sequence. Mr. Tanner says with much point: "It is because engineering is the basic industry on which almost every other depends, and is the key to successful planning and increased output in a period of re-equipment, that we engineers are so concerned about practical planning for our own industry." Others, of course, can argue with just as much force that coal-mining or iron and steel,¹ or transport, etc., is the "basic" industry.

As a consequence, therefore, of the failure of the Government to produce an overall plan which satisfies all the planners, a large crop of planning schemes pour into the centre from the periphery. The sectional planners are anxious to put purpose into the overall plan. From their knowledge of their immediate economic environment they see clearly that, as far as their own section is concerned, the overall plan is defective. They conclude that the first step required is for the Central Government to put their section right and they cannot understand why this should not be proceeded with forthwith. What they do not see is that their sectional plans might well conflict with other sectional plans or with the necessary character of the co-ordinating agency at the centre. On the other hand the central co-ordinating agency is not in a position to chop the sectional plans about in order to make them fit together, partly because it cannot know enough to do so, partly because

¹ The steel industry appears to have a budget for 1947 (see *Manchester Guardian*, 6th January, 1947). It would be interesting to know whether this was based upon the Government allocations of coal then ruling and what changes have been called for in this budget by the severe cutting of these allocations on 13th January.

the number of possible permutations between combinations of sectional schemes is infinitely large. So whilst those at the centre plead patience, those outside cry forward. All this may tend to add to the original confusion.

The second stage of confusion may be expected to take the form of growing clamour of "Where is the Overall Plan?" The *Economist*¹ has already raised this issue. "No visible signs of any general plan have appeared but it had been faintly hoped that one might be being made somewhere in the depths of the Cabinet Offices. Now such faint hopes are dashed and one is brought up once more against the bold fact that the headquarters command are not commanding and that innumerable minor offensives are taking place with no grand strategy." And Mr. Graham Hutton, in a most moving appeal² has admitted: "it is being realized that there are far too many Socialist plans and planners but no National Plan. Questions of fine calculation for the next decade demand a national overall plan: *the Plan*." A group of Labour members tabled on 30th January, 1947, a motion that "a five-year plan should be prepared . . . also plans for each industry . . . to fit into the national plan."

Once this clamour attains a certain intensity it probably cannot be stilled except by visible and concrete evidence of the existence of the plan. The planners are now out for red meat; they are not likely to be fobbed off with what will appear to them as the somewhat anaemic offer of a Socialist pricing system. At this stage it is, therefore, very likely that a fat planning book must be produced and exhibited if dwindling faiths are to be sustained and revived. The supreme central planners may search for a breathing space to perfect their plans by:

- (a) declaring that the plan cannot be properly formed until much more information has been collected. Thus Sir Stafford Cripps³: "It is no good doing any more to-day because no plan can be any more than an approximation. The statistics do not exist yet."

¹ 23rd November, 1946.

² *Observer*, 22nd September, 1946, "Socialism in Search of a Plan."

³ House of Commons, 26th February, 1946.

- (b) complaining that there is "a shortage of administrative talent."
- (c) complaining that some members of the community are trying to obstruct the plan.
- (d) challenging, as has Mr. Bevan, the value of having a plan at all "at this stage."

Finally, however, the Government must presumably pull out and display the plan. The present Government has promised to do this early in 1947. It will be interesting to see whether this satisfies most planners as a visible, concrete embodiment of the overall national plan.

The third, final stage in the disillusionment may well come in the form of a widespread recognition that there is in fact no overall plan. What happens after that only time can tell. It might well become increasingly believed, as some apparently already believe, that there cannot be a national overall plan in a free society, that it is an administrative impossibility, a contradiction in terms, a will-o'-the-wisp. Or, alternatively, a more determined effort might be made to create and impose an overall plan. For where the concept of overall planning has taken possession of an individual, the apparent failure of an overall plan will always be attributed either to the fact that the planning was "bad" in the past and must be made "good" in the future, or to the fact that the planning was not really extensive enough and must be made even more "overall" or, more simply, to the fact that sabotage is prevalent and can no longer be tolerated. If this view gains the day we would expect more of the limited supply of the nation's economic intelligence to be drawn into the Civil Service, more time to be devoted by Ministers and Civil Servants to the task of making the plan, more powers to be taken by the State to bring the various elements of the community into line with the plan, more emphasis placed upon producing what it is decided to produce with less regard for the needs of the consumers (at least of the consumers in the home market). It is then that the social scientist would have the interesting task of watching the tug-of-war between the alleged advantages of an overall plan and the claims for elementary liberties for the individual.

JOHN JEWKES.

The Handicap of Britain's Early Start

This article examines the argument that Britain is economically handicapped by her early start in industrial development. That argument may be summarised as follows : Britain started the Industrial Revolution ; she was the first country to institute modern industrial methods. Being the first, she had to experiment. Not all experiments proved fruitful ; other countries, copying our successes and not our failures, were able to profit by our experience. Their industries and their industrial plant came later in time, and were, therefore, more modern. Our industries, at the present time are handicapped by being out of date and not so efficient as the industries of other countries. If we had industrialised later the industries would be technically more efficient and the capital employed in them would be placed to better advantage.¹

I

In discussions of the prospects of many British industries the age of the equipment is often advanced as a reason for its being out of date and less efficient than the equipment of other countries. The figures quoted for the cost of re-conversion of British Industry in total amount to a considerable proportion

¹ " . . . she had a long start, and although that meant that she had to bear the burden of the experiments and that other countries could begin where she left off . . . " (Knowles "Industrial and Commercial Revolution," p. 162).

"In no other country was the transition so slow as in this country. Other nations were able to begin where Great Britain left off in her experiments and as they developed later their industrial revolution coincided with the railways which in their case hastened the pace of the change." (*op. cit.* p. 78).

"The location of these firms had been determined by the conditions of the past and they were unable to take advantage of the cheaper ores which technical advance had made it possible for steel makers to use" (one of the reasons advanced for the present position of the steel industry by D. L. Burn in "The Economic History of Steel-making, 1867-1939," quoted from the review of the book by Professor G. C. Allen, *Economic Journal*, June, 1941).

"Britain has suffered the usual fate of the pioneer as regards canals." (M. R. Bonavia, "The Economics of Transport," p. 31.)

of our future national income. They are, in part, attributed to the lack of replacements during the war, but in part are required to make our industries as efficient as those of other countries, which had the advantage of a later start.

The first point to be considered is that of Britain's comparative position. The statistics showing that we enjoy a declining proportion of world production simply mean that other countries are developing those industries which were developed first in Britain. It is not to be expected that no other country would fail to utilise resources of coal and iron, or would refrain from building railways, because Britain had proved that these ventures were successful.

A case in point arises over the demand for iron and steel for railway construction. It is pointed out that between 1870 and 1920, while railway mileage increased in Britain by 53 per cent., for the world as a whole the increase was 430 per cent., or in terms of mileage the world's increase was 551,000, and Britain's share of this increase was 8,200 miles.¹ The fact that Britain had been the first with railway construction meant that by 1870 the bulk of the main line system had been laid down. Therefore Britain did not need to devote resources to railway construction. She could devote her resources to using the railways for the conveyance of traffic. The object of building railways presumably being for the conveyance of passengers and goods, not railway construction *per se*, it is no evidence of the decline in capital goods industries to show that the capital goods have been provided and are in use.

Once a new industry has become established, there is a lessened demand for those industries which provide its heavy capital. We cannot go on building railways at the same rate, otherwise the country would be covered completely with railway lines, and there would be no room for the steel plant to make the rails. The demand is reduced to a replacement demand for worn out equipment, and the better the original, the longer its working life, the less is this replacement demand.

If, for example, with a stationary population, we could build houses with an indefinitely long life, once the population

¹ "Iron and Steel in Britain, 1870-1930." Burnham and Hoskins, p. 74.

had been housed, there would be no further demand for houses ; the building industry would disappear. No longer would there be need to devote scarce resources of capital and labour to the provision of houses, unless a later generation condemned the houses which had been built to last for ever.

The fact that Britain was first in the field meant that when she began any industry she naturally produced 100 per cent. of the world output. As soon as one other country produced a single unit of the commodity, our share of world production would fall to something less than 100 per cent., and with the extension of production over the world, the same output in Britain would be a smaller proportion of the world total. There are, however, instances where the decline of output from Britain was absolute and not merely relative.

But was the early start a handicap? If other regions have greater natural advantages for a particular industry, could it be a disadvantage to Britain that she had made the first start? If countries with this greater natural advantage had been the experimenters or first producers we should have been at a natural disadvantage. It is probable that certain industries which have contributed to our stock of wealth would never have become established at all. We often were enabled to develop them, to obtain wealth, to add to our capital, because of our early start.

It may be claimed that there are some industries where the early start led to a using up of resources. Because we first used coal and iron on a large scale, the supplies, limited by nature, are being exhausted—mines are getting deeper, seams are thinner, the cost of extraction rises with the difficulties of mining. If the resources were being wasted there might be truth in this argument.

Assuming the supplies to be fixed by nature, the coal and iron beneath the soil are part of the country's capital. If the resources had not been exploited in the past, coal and iron could now be produced in Britain at a lower cost. But that would only postpone the problem. If the best seams were used now, posterity would be able to blame present day exploitation for their increased costs of extraction.

The resources are there to be used ; they are fixed in quantity ; they can be used once only. Carry the argument further and we should not touch the coal seams in this island ; we should deny ourselves the use of any of these substances because their exploitation would make us poorer in natural resources. It would make us poorer in unexploited resources, but the exploitation would make us richer in the products of those industries which had used the natural resources.

We could, and we did, turn the coal and iron into other commodities, such as ships and railways which directly ministered to our wants and increased the wealth which we inherited. It is ingratitude to blame the enterprising people who brought these commodities to the surface, so that we could at a later date enjoy the fruits of their labours.

Once the mines have become exhausted, they are unable to continue to produce what they formerly did. There must be a decline of activity in those areas, but the decline is not a sign of decadence, it is a sign of the full utilisation of natural resources, the effort which was there expended can now be diverted to other activities.

It is definitely misleading to judge the efficiency of a country's production by the relative decline of certain industries. If the industries can be carried on cheaper elsewhere, then resources can be diverted to other industries where the return is greater. Progress leads to relative and absolute declines in some industries.

Where we were the pioneers, we must have been in the van ; being pioneers means that others were behind. No complaint of our pioneering costs could be justified when as fast as other countries copied our inventions and methods, we made better inventions which put their copies out of date. There would be legitimate grounds of complaint if the pace of our progress fell behind that of other countries. But the handicap would then be the lack of progress, not the long start. And we cannot use as scape goat our *laissez-faire* ancestor who lead the world. Can it seriously be contended that we could be supreme in the production of every economic good ?

II

It is further contended that the early start lead to processes being undertaken and to locations of industry being fixed, which were suitable to earlier times, but which are not now suitable. Because a certain process was the best in 1846 the dead hand of the past ties the industry to the same process in 1946.

Assuming that the processes which were in operation in 1846 were the best which could be devised, that the pioneers had not the present day knowledge or experience, that they were fallible men facing new problems, and that in some cases they did make mistakes—all this cannot in any way obstruct present day entrepreneurs from embarking on new processes of manufacture, in keeping with existing knowledge. If a new process is cheaper and more efficient, the existence of the present process and equipment is not *ipso facto* a barrier. If the new method is better it will supersede the old. To start an industry, without previous experience is, in itself, a disadvantage.

It is a false argument to state that coal, cotton, iron and steel, canals and railways, etc., are all badly organised, equipped and managed, and that with the present national income it would have been better not to have any one, or all, of them as a legacy, but to use existing resources to establish them now in the light of modern experience. The present income and resources of the country have grown up, and arise from, the activities of these various industries. Capital is not a resource which can be poured out of a bottle, nor a monetary expedient to be used on tap. The capital of the country consists of the accumulated capitals of past industry. Take away any one of the industries and the national capital is depleted. The present fashion of talking of capital and labour, as though they were two homogeneous entities distinct from specific units of capital and labour, is perhaps responsible for the attitude which is criticised here.

The present earnings of an industry provide the income out of which capital is accumulated and which can be used either

to equip new industries or to modernise the old, if the modernisation is necessary and economically worth while.

If it is agreed that the older industries have earned their keep ; that they were not completely misdirected efforts, such as sinking a mine without the discovery of any valuable mineral, but that they produced a flow of utilities in their time, then it must be agreed that this flow of utilities has added to the national income and national capital. It is from this flow of utilities that there come the resources necessary for current capital expenditure.

Even if a part of the effort of older times were misdirected, the results of that effort are here for present use. If it were decided to put down a steel industry of a certain type, there exists the wealth created by the present steel industry, not necessarily the present equipment, with which to build a new ; without the present wealth the country would have fewer resources out of which to undertake new ventures.

The mistaken idea probably arises from regarding the original capital sums expended as being present money tied to a particular use. It is not present money, it is past expenditure of resources represented in present monetary accounts.

The original capital has been used and replaced—used and replaced. Each generation has to make its own decisions whether to replace or not, and the fact that the capital exists to-day is a result of replacement by later entrepreneurs than the original founders of the industries.

In the language of accounting, the wearing away of the original capital would be provided for by depreciation. At the end of the working life, assuming the normal accounting procedure, the particular asset would be written down to zero or scrap value. During its life, the receipts for its use, besides covering the running costs, would have to cover the depreciation costs as well. If an asset, over the normal period of life, has earned its depreciation quotas, the industry is in long period equilibrium. The depreciation, or capital recovery, need not be invested back in the same type of plant, or even in the same industry. The recovery of capital may be used to

buy new and more up-to-date equipment, or to embark on new ventures.

The earlier decision, to start an industry, does not bind subsequent entrepreneurs. They may use the earnings of that industry in the form of depreciation accounts, to follow the same line, or to embark on fresh ones. The decision is not made at the commencement, but on each occasion when the equipment is renewed.

Where an industry does not earn sufficient to replace its capital, and the industry is superseded by another, it is a case of misdirected effort. Expectations have not been realised and if there had been foreknowledge of future events capital would not have been invested in that industry to the same extent. But it is not cases of this nature which usually call for comment. The fact that investors in the Turnpike Roads did not foresee the coming of the "calamity of the railways" is considered to be a bygone. It is where an industry is still in existence, and is in a state which does not meet with the approval of certain critics, that the handicap of age is advanced as a cause of relative inefficiency. It is not inefficient if it is completely superceded, but only inefficient if it survives competition.

A case in point occurs in the history of canals. One of the reasons commonly advanced for their lack of progress is the fact that, owing to their being established in an age when there was no demand for through traffic, each canal was built to a different gauge. The result was that it became impossible, owing to the multiplicity of tolls, the narrowness of connecting links and differences in the locks, for an adequate service to develop. They were, therefore, owing to their early start, unable to compete with the railways.

Canals were built for local traffic, and as such they fulfilled their function well. They were in the main extremely profitable, so that the capital expended in their construction was returned to their shareholders; in one case a canal returned 197 per cent. of its capital in the way of dividend in one year.¹ In that case, as far as the shareholders were concerned, they

¹ Knowles, *op. cit.*, p. 244.

would have been rewarded for their investment even if they had never received another penny.

As far as the community was concerned, the traffic carried by the canals aided in the growth of wealth which made railway financing so comparatively simple in this country. The improved trade, fostered by the canals, produced wealth which could be invested in the new venture. Without the canals, of short length and narrow gauge, there would have been less finance for railway construction. The national income was increased by the canal investments.

Development of canals later was slow, and the lack of uniformity of gauge is advanced as a deterrent to through traffic. But the main reason for the decline of the canals was the invention of the railways, which proved better able to handle the rising traffic. Railways were started in a similar way to canals, short lines for local traffic, and in some cases of different gauges. A long time elapsed before the railways developed ideas of through traffic and of standardised gauges and equipment. The same change did not take place, to the same extent, with the canals. But there was no reason why the same improvements and re-designing of canals, improvements in locks, widening of the narrow links, etc., could not have been undertaken with the canal system. The change did not occur because it was not worth while for any one to make the change, but because traffic was not expanding. If there had been no railways, and if the increased traffic of the Nineteenth Century had been carried by the canals, there would have been the economic incentive to improve the canal system.

If canals were to be built now for the first time, they would be constructed for through traffic, capable of taking larger barges on all systems. However, in the light of present day requirements, it would not be an economic proposition to construct a complete canal network. The investment would not be made. If the new investment would not be made now with a fresh start, it is not worth rebuilding the canals at a possible equal expense.

III

The decision to modernise an existing industry depends on the capital cost of the conversion, balanced against the savings in running costs involved. The capital cost of the original equipment is not a factor to be taken into consideration. That capital is sunk and gone. It is not a question of whether the cost of the new, over that of the old, is compensated by a decrease in running costs. It is the cost of the new equipment against the savings carried out by the operation of the new investment.

The place in economic theory where capital ends and land begins is a difficult one. In general, the capital expenditure of the past, which is irrecoverable, may be treated as an improvement of the "land." The original cost of the canals, for example, may be regarded as adding to the permanent alteration of the natural waterways, which in themselves are part of the original, but destructible, gifts of nature. The existing canal system can be taken as given, and its layout is at the present day no more a handicap of its age than is the layout of the Thames estuary, or any other natural resource. Old capital, instead of being a drawback, is merged in the original "land," and is one of the many given factors of scarce resources about which we must make decisions to utilise or not, as present circumstances decree.

Age of equipment, instead of being a liability, is an asset. If capital resources are built to last for five years, for the industry to be in equilibrium, the returns from its use, besides the current rate of interest, must be sufficient to recover or to amortise the original cost, so that it may be replaced upon wearing out. One-fifth of its life goes every year. If equipment lasts twenty years, only 5 per cent. of its life is a charge on current production. If the life is indefinite, there will be no amortisation charge for the asset.

It has been asserted that many British trawlers are over forty years old. One reaction to this, is to believe that they must be inefficient and not up to modern standards. Another reaction is to think, what good ships they are, and how well

they were built. Similarly with the age of some of the equipment used in textile weaving. From the point of view of social costs, this equipment was paid for at the beginning of the Twentieth Century. The fact that it is now used, proves that it has some economic value. As this old equipment has paid for its use, it has become part of the given resources of the present day, and the present return on it is in the nature of a rent. The resources, in so far as they have outlived their expected or normal life, are in the nature of "free" goods. Part of present production comes from the use of what are virtually free goods, but which pay some return to their owners.

This factor must be borne in mind when comparing equipment and capitalisation in Great Britain with that of other countries. Invidious comparisons are drawn between the output per man hour with old equipment in Britain, and the output per man hour using different equipment and with a different degree of capitalisation, in other countries. Doubtless if British industries had more capital, output *per man hour* would be greater. What is denied is that the total cost of production, of labour and capital, must necessarily be lower. The crucial question is : will the cost of re-equipment of many British industries reduce total costs, including the cost of the new capital? Whatever are the technical details, that is the economic problem.

It is a commonplace of economic theory that the entrepreneur combines his factors in the optimum manner, under the circumstances applicable to him. If from the past he inherits "free" equipment he will tend to use more of that factor and less of others. His total costs may be lower than that of entrepreneurs in other countries who have to provide for the cost and amortisation of new capital equipment.

The test of replacement is that the new total cost of capital, plus the new running charges, must be less than the running charges of the old method. If this is not so, the old is more efficient economically because it is using resources to the greatest advantage. In terms of our real wealth at the time, and the comparative plentifulness of capital for investment, the old investments were not costly in real resources. The

lower rates of interest current in Britain during the Nineteenth Century compared with the rate in some other countries, meant that we could afford to build for long term permanence, compared with other countries where the higher rate of interest meant that capital goods had to be less costly and less durable. This stock of useful assets should not be lightly cast aside, because there are better, and dearer, ones to be had.

It is remarkable that before the war destroyed much of our wealth and overseas investments (built up out of past industry), Britain, with its old equipment and lower production per man hour in certain industries, enjoyed a standard of living surpassed by few others. The long start, and the accumulation of capital of various degrees of efficiency, contributed to this pre-war wealth.

There is no guarantee that re-equipment will be final, that if all proposed schemes of capitalisation are adopted, that British industry will be finally re-equipped. There will be re-investment and replacement. Future generations will have the legacy of present investment, and present mistakes, and will have to re-equip their industries to suit their current costs and requirements. If we are poor because of past investments, the Hottentots, without any capital equipment or past errors, are potentially the richest nation. All their future industries can profit by the mistakes of the pioneers in all industrial countries. But the Hottentots have no capital wealth from the past with which to build modern industries. They face the handicap of having no early start.

The test of an economic system is not whether certain industries are advancing or declining, nor that certain industries are less efficient in capital per worker than those in other countries, but whether the system as a whole supplies consumers with the goods they need, and provides a high standard of living. In so far as British industry has not done this, the fault is not with the past, but with the ideas of restrictionism current at the present day. The fault is in ourselves and not in what we have inherited.

F. R. J. JERVIS.

*The Prospects for Foreign Trade in the Post-War World

The growth of the doctrine and practice of national economic planning and the experiences and experiments of the Great Depression have led many persons to look with an unfriendly eye on foreign trade, with its intractability to the disciplines of national Five-Year Plans. Even British economists reared in the free-trade tradition have come to write down the benefits that flow from foreign trade and to attach so much weight to its risks and inconveniences and disorderliness as seen from the point of view of the national planner that they welcome any natural tendencies toward autarky and either definitely advocate positive reinforcement by government for such tendencies or condemn it in such mild and hesitant terms as for practical purposes to amount to the same thing.¹

The actual shrinkage in the ratio of foreign trade to total production over the past few generations would of itself have sufficed to raise the question as to whether forces have not been at work to reduce the importance of international specialization in production as a means of augmenting national income, and still more, national welfare in general. German economists had earlier given their answer the dignity of a historical law, the "law of the diminishing importance of foreign trade." It is not clear, however, that they had much evidence to present in support of the existence of this law beyond what could be inferred from the fact that for most countries and for the world at large the ratio of the value of foreign trade to total production had for a long time been

¹ Cf. J. M. Keynes, "National Self-Sufficiency," *Yale Review*, June, 1933, pp. 755-769 (also published in *New Statesman*, July 8th and 15th, 1933); D. H. Robertson, "The Future of International Trade," *Economic Journal*, March, 1938, pp. 1-15. It is perhaps unnecessary to point out that there was a very substantial degree of difference as between these two articles in the assurance with which *the autarkic* approach was supported.

*This paper was read before the Manchester Statistical Society on 19th June, 1946.

declining. But as meanwhile total production was increasing by leaps and bounds, a decline in the ratio of foreign trade to total production, assuming no change significant for present purposes in the economic character of foreign trade, could be quite consistent with a great increase in its importance. Also, as will be expanded upon later, the decline in the relative volume of foreign trade may have been neither fortuitous nor the consequence of the victory of the fittest in the struggle between international trade and domestic trade but may instead have been the logical consequence of deliberate policy whose economic merits could not be settled merely by a demonstration that it had, in part at least, attained its objective. And even if the potential capacity of international specialization to yield economic benefit has been undergoing a secular decline, and if the relative shrinkage in the volume of foreign trade has been the consequence wholly or mainly of the shrinkage of its serviceability to economic welfare, the question would still remain as to whether it was sensible deliberately to suppress it further because the consequent injury from so doing would not be so great as was once the case.

It is the purpose of this paper to examine in general terms the nature of the historical forces which have been influencing the volume of foreign trade, their significance for the question as to whether there has been a decline in the potential capacity of foreign trade to yield economic benefit, and their bearing on the issue of what direction commercial policy should take in the post-war period.

It is offered as an explanation of the downward trend in the ratio of foreign trade to total production that technological progress has operated to narrow the range of comparative differences in costs of production at least of manufactures, and has thus lessened the scope for economic gain from international specialization, at least in the manufacturing field. Technical skills, it is claimed, are now more widely distributed and technical knowledge is more communicable throughout the world than was formerly the case. Modern productive processes, also, are said to require less skill

of the mass of labourers involved, so that, in the words of Keynes: "most modern processes of mass-production can be performed in most countries and climates with almost equal efficiency,"¹ and in the words of Robertson, more cautious only in that they are unqualifiedly applied to textiles alone: "in particular, it has become evident that the simpler processes of textile manufacture can be carried on with approximately equal efficiency by almost any kind of population in almost any part of the world."²

Perhaps so, although it is certainly not borne out by the available statistics of labour inputs or fuel-inputs or capital-inputs per unit of output for manufactures even as between the United States and Canada, to say nothing of the United States and England, or England and India, or Switzerland and China. It leaves it a mystery why countries with low money wages and low materials costs should insist on the necessity of import duties to keep themselves from being undersold by other countries. It is true that the facilities for the diffusion of technical knowledge and for the spread of skills are much more abundant than used to be the case. But there are now so much more knowledge and skill to be communicated and so many more persons to whom it needs to be communicated that, if reliable measurement were possible, perhaps it would turn out that relative to the greater number of persons involved the degree of diffusion is less rather than greater than it once was. Even leaving "backward" peoples out of account, I am not convinced that there is more levelling of industrial knowledge and skills to-day in the textile industry or in manufacturing at large than there was a century ago. The engineers move about more freely than they did then—or do they? But if the tales they tell in meetings of their profession are true, their task is often more to design processes suitable to the capacities and the attitudes of the workers and to the special climatic and other conditions in a particular region than to show these workers how to use the processes originated in another region.

¹ *Op. cit.*, p. 760.

² *Op. cit.*, p. 2.

The belief that there is even a moderate approach to "equal efficiency" in manufactures throughout the world, or even throughout the north temperate zone, rests largely, I suspect, on some optical illusions. It is certainly true now, as it was not 50 years ago, that a wide range of countries can produce, if they will, locomotives, complicated machinery, worsteds, shoes, delicate instruments, of comparable quality. What is not true, however, is that they can produce them at anything like comparable real costs. The United States and Japan were in the 1930's both able to produce automobiles and chemicals and typewriters, and in the lower price ranges these were of comparable quality. But despite the very much lower wage rates in Japan it required a stiff amount of tariff protection to keep these American products from completely dominating the Japanese market. The fact that the products of different countries may look alike does not mean that the processes by which they were manufactured would also look alike if put under the scrutiny of the trained engineer or economist. The fact also that when the similar products of different countries are sold in the same market they tend to be sold at similar prices does not mean that their costs of production, even their *money* costs of production, were at all similar. The similarity of *delivered* prices may conceal wide differences in money costs of production at the factory, and underneath the differences in money costs at the factory may lie even wider differences in wage rates, and in prices of raw materials. If the differences of "efficiency" between countries in manufactures are small, why is it that it tends to be the high-wage countries who command the export markets? After all, manufactures do move in volume in foreign trade, despite high wage-rates in the exporting countries, despite transportation costs, despite extra marketing costs for the foreign product because of local differences in language, specifications, and fashions, and despite import duties often exceeding 50 per cent. of the factory price. Since national deficiencies in efficiency are largely remediable if enough effort is made to remedy them, to minimize them invites costly complacency. Intellectually, it involves implicit denial that the patently great differences in

natural levels of education, in the extent, character, and attitudes of labour organization, in nutrition and health, in social legislation and political organization, in the supply and quality of business enterprise, have much economic significance.

It is frequently claimed also that the substitution of electric for steam-power and of hydro-power and petroleum for coal, and the growth in relative consumption of the products of the light industries requiring less power, have lessened the dependence of industry on nearby supplies of coal and have thus facilitated a wider distribution of industry. I suspect that this is largely a rationalization of what has been happening to England's coal-based industry. England specialized in industries relying heavily on coal, and *these* industries, notably the lighter branches of the steel industry, have become somewhat less tied to particular localities by the weakening of their dependence on coal. The great development in power-technology, however, has not been so much the development of sources of mechanical power alternative to coal but the cheapening of mechanical power in general and its consequent substitution for man-power and animal-power. The sources of mechanical power taken as a whole are much less widely distributed than man-power and animal-power. The development of mechanical power, at least if a long retrospective view is taken, seems clearly to have widened instead of narrowed the range of average differences in comparative costs between countries. This development, even more clearly, has increased the productive capacity of the world, and in doing so has increased the economic area in which differences in comparative costs can provide a potential field of operation for profitable regional specialization.

The growth in technical knowledge, it is also said, by extending the possibilities of substitution of one raw material for another, lessens the dependence of any one area on the outside world. The experience of Germany, as of Sweden, during the recent war does, of course, show that it is technically more feasible now than formerly for a country to maintain an approximation of its normal modern range of consumption even if imports are cut off. For some countries at least, it is

consequently more nearly possible to survive in the absence of any imports than was the case in earlier times. But the growth of knowledge of the potentialities of raw materials also works in the opposite direction, namely, to make it profitable to substitute new imported for old domestic primary products. Wool and hemp and leather, the older staple raw materials of the textile industry, are less regionally concentrated in their production than cotton, rayon, and nylon. This is true also of animal fats as compared to copra, palm-seeds, cottonseed, and groundnuts, and of wood, stone, and iron as building materials as compared to cement, glass, the lighter metals, and plastics.

It is only in manufactures that a case of any plausibility can be made for an historical trend toward the ironing out of differences in efficiency, and it is only in the exchange of manufactures for manufactures and on the assumption that primary products could not enter into foreign trade that the existence of such a trend would necessarily involve the contraction of the field for profitable foreign trade. For even if there were everywhere exact equality in efficiency in manufactures, there would still be large scope for gainful exchange of the manufactures of countries relatively inefficient in the production of foodstuffs and raw materials for the primary products of countries relatively efficient in agriculture and mining. The gain from foreign trade results from the existence of comparative differences in efficiency. Such comparative differences will exist as between manufactures and primary products even if there is absolute equality of efficiency for manufactures provided there is inequality for non-manufactured products. All that would then be true would be that there was no profitable basis for the exchange of manufactures for manufactures. In any case, notwithstanding these alleged historical trends of technology and despite the undoubted trend toward the relative—as well as absolute—increase of the barriers against imports of manufactures, the statistics of world trade, at least since 1913, show no tendency for the proportion

of foreign trade which consists of the exchange of manufactures for manufactures to decline.¹

I find echoes in the recent literature of an old argument, presented over a century ago by an English economist, Robert Torrens, to the effect that with growing density of population specialization in the production of agricultural products is checked by the operation of the law of diminishing returns, with the result that all countries are forced largely to produce their own raw materials and their own manufactures.²

If migration and natural growth of population tended everywhere to bring the ratio of labor resources to natural resources to the same level, this reasoning, granted certain other assumptions, would be sound. The old industrial countries would find that per unit of effort engaged in the production of manufactures for export they were getting in exchange over the years a smaller quantity of primary products, and it would after a time become advantageous for them to divert productive resources from the production of manufactures for export to the domestic production of foodstuffs and raw materials. But population-growths and technological progress have been uneven as between industrial and agrarian countries, and it is by no means clear that the net result of all

¹ Cf. Albert O. Hirschman, *National Power and the Structure of Foreign Trade*. University of California Press. Berkeley, California, 1945, p. 126.

² Robert Torrens, *Essay on the Production of Wealth*, London, 1821, pp. 288-289. The relevant passage is worthy of quotation in full: "As the several nations of the world advance in wealth and population, the commercial intercourse between them must gradually become less important and beneficial . . . the species of foreign trade which has the most powerful influence in raising profits and increasing wealth, is that which is carried on between an old country in which raw produce bears a high value in relation to wrought goods, and a new country where wrought goods possess a high exchangeable power with respect to raw produce. Now, as new countries advance in population, the cultivation of inferior soils must increase the cost of raising raw produce, and the division of labour reduce the expense of working it up. Hence, in all new settlements, the increasing value of raw produce must gradually check its exportation, and the falling value of wrought goods progressively prevent their importation; until at length the commercial intercourse between nations shall be confined to those peculiar articles, in the production of which the immutable circumstances of soil and climate give one country a permanent advantage over another."

the factors at work has been to lessen the extent to which it is profitable under existing conditions for old industrial countries to depend on imports for their foodstuffs and raw materials. It is probably true, however, that many countries have remained as specialized in the production of primary products as they are only or mainly because of remediable backwardness in technology and scarcity of capital. For such countries systematic promotion of industrialization is wise. If industrialization makes great progress in the countries still largely devoted to primary production continued specialization in manufactures will become increasingly difficult for the older countries, and Torrens' forecast will become true. During the past century, however, it is not clear that any important country which had been a net exporter of primary products, with the exception of the United States, had ceased to be so as the result of industrialization, and the regions of the world still capable of great expansion of primary production if capital and technical knowledge are made available to them are so extensive as to make Torrens' proposition a hazardous basis for forecast even as to the next century.

Keynes has noted that as per-capita wealth and income rise, housing, personal service, and local amenities, which are much less available for international exchange than tangible commodities, take on a more important role in consumers' expenditures. But with greater wealth comes a greater absolute capacity to profit from exchange, domestic or international. Greater wealth tends also to develop the demand for greater variety, and this tends to increase on the average the distance between point of consumption and point of production. Transportation costs, moreover, tend to be smaller in proportion to value for quality goods than for the staples of low-income consumption, and cost to be less of a factor in determining the direction of consumer expenditures, and thus the cost of carriage from a distant source which is often referred to as a "natural protection" for home industry becomes less of a barrier to import for a rich than for a poor country. While it is by no means certain, therefore, that

growth of per-capita wealth tends to lessen even the *relative* importance of foreign trade, there is no reason whatsoever for questioning that it operates to increase its absolute importance.

I have now considered all of the important historical trends in the patterns of production and of consumption which are supposed to have operated in the past century to lessen the importance of foreign trade. I believe I have succeeded in showing, at the least, that if these factors had alone been at work it would not be clear that the ratio of world trade to world production would have fallen and that even if their net effect had been to reduce the relative importance of foreign trade they would nevertheless have tended to increase its absolute importance, its absolute contribution to economic welfare.

Since the 1870's, the ratio of world trade to world production has, however, been in fact declining, but it is not difficult to find an adequate explanation aside from "natural" or unplanned changes in the conditions of production or in human tastes. From the end of the Napoleonic Wars to the 1870's, there was a marked downward trend in tariffs, but from then on there was almost everywhere—in Great Britain not until World War I—a pronounced upward trend which has continued without significant break to the present day. In the 1930's there were added to the ordinary import duties even more effective barriers to trade in the form of import quotas and exchange controls. Given the rising trend of these deliberate obstacles to foreign trade, it seems otiose to seek in "natural factors" the important causes of the decline in the relative importance of foreign trade which simultaneously occurred. Given the extent of these trade barriers in recent years, there seems more occasion for wonder at the strength of the natural forces which have enabled foreign trade to surmount these barriers as well as it has done.

In considering the potential capacity of foreign trade to contribute to economic welfare, it is important that attention be given to the potential trade, to the trade which has been suppressed by legislative and administrative barriers, as well as

to the trade which has survived these barriers. But in appraising the importance of even the actual trade, judgment will be warped if it is not valued higher than its ratio to total production. In the United States the export trade, including exports of services, does not provide a market for more than 10 per cent. of American production. Many Americans are led thereby to the conclusion that foreign trade cannot be a matter of vital importance to the American economy. It is proper, of course, to point out in rebuttal that this 10 per cent. is only what remains after the American tariff and the trade barriers of other countries have done their work. But even for the actual trade, the 10 per cent. figure is misleading as a measure of its importance. It is impossible to determine what figure would correctly represent its importance, but it is possible to demonstrate by reasoning that it would be significantly larger than 10 per cent.

The 10 per cent. overall figure conceals a wide range of ratios of value of exports to value of total output for different American industries, and the ratio reaches as high as 50 per cent. for some industries. This is in the short-run important. The uneven impact of shutting off of American exports on different American industries would mean catastrophe for some industries, with serious repercussions on other industries not directly concerned with export, so that the adverse effect on industry as a whole would be greater than if the impact were evenly distributed. But in the long run these divergencies of impact would be evened out through transfer of productive resources from the more hard-hit industries to other parts of the productive economy, and industry as a whole would share more-or-less evenly the adjustment to the elimination of exports.

A sounder method of appraisal of the long-run economic importance of existing foreign trade for the United States, or for any country with high import barriers, is to put emphasis on the imports rather than the exports. The American imports which are left free of duty are all imports which for one reason or another are regarded as of special value to the American economy. Some are "key products,"—products required in small

volume only but vital as ingredients in the productive processes of important industries, and not producible at home. For the United States, some of the non-ferrous metals and some chemicals are representative of this category. Others are commodities which bulk large in the imports, but are not producible at all or in quantity in the United States, and are highly valued by the American public as raw materials for processing or as consumers' goods. Natural rubber, coffee, silk, cocoa, jute, bananas, are examples of this category. Still others are commodities which are readily producible at home, but at costs greatly exceeding the costs of the imported goods. Carpet wool, long-staple cotton, various hides and skins, belong either in this or in the previous category. Still another category, destined to be of growing importance, embraces urgently wanted commodities which are procurable from domestic sources only by serious encroachment on an exhaustible stock. Actual and potential examples are petroleum, copper, wood-pulp, lumber. In all these cases, the fact that they are admitted free of duty—or at low rates of duty—demonstrates, given the American prejudice against imports, that they are regarded as worth more to the economy as a whole than their monetary value alone would indicate. For all but the marginal units of such imports, the units which are just on the margin of being worth importing, there is for the United States a "consumers' surplus," an excess of what buyers would willingly pay rather than go without over what has to be paid. There is also "consumers' surplus," of course, in connection with the domestic consumption of goods produced at home. But given the strong political bias against import the fact that these imports are left free of duty reflects a judgment that, per dollar of money costs, they are on the average worth more than the commodities produced at home for domestic consumption. In the case of the imports which enter in spite of heavy duties part of the national "consumers' surplus" is appropriated as customs revenue accruing to the national treasury, and thus becomes visible and measurable. But even here there is considerable "consumers' surplus" which is not less important because it remains invisible.

In recent years there have been operating additional factors of "political" as distinguished from "natural" origin which throw difficulties in the way of a flourishing foreign trade. The increasing participation of governments in industry operates as a brake on imports in several ways. When a community spends its income through government instead of on private initiative, such intangibles as education, public health, parks, and swimming pools, and also, I fear, the writing of intra-office memoranda and the design and distribution of official forms, take an enlarged proportion of the national income, and these services must for the most part be produced locally. Governments as purchasers, whether of office supplies or furniture, or munitions, or cloth for uniforms, almost universally apply a supplementary tariff, in the form of an administrative preference to domestic sources of supply, over-and-above the ordinary import duties to which the purchases of private individuals and officials alike are legally subject. When governments nationalize old industries or set up new industries for public operation, they not only tend to add this supplementary tariff but to set it at whatever level is necessary totally to suppress imports as long as they have unused capacity and to expand capacity as long as with full operation of existing plant there still is a market for imports. Given the natural proclivities of governments, they are especially unlikely to tolerate imports which by their cheapness or their attractiveness of design or quality cast an embarrassing reflection on the efficiency or the taste of government enterprise.

Governments everywhere also—except perhaps in the United States—are undertaking the responsibility of maintaining "full employment," and are finding that the inherent uncertainties and irregularities of foreign trade present difficulties for the formulation of comprehensive economic plans and seem likely also to interfere with their execution according to plan. Given the general tendency these days to underestimate the contribution which foreign trade makes to the average level of economic well-being and to overestimate the contribution it makes to the instability of that level, there is

great likelihood that many countries will seek a solution of this problem by cutting down imports to the bare essentials.

This is a gloomy picture I have painted of the post-war prospects for foreign trade, and yet I do not think I have erred on the side of pessimism. I have said nothing of the lingering effects of the devastation of war, of the dismantling of German and Balkan and Japanese productive resources, of the threat of civil war and revolution looming over a large part of the world's surface.

There is only one ground for hope that these forebodings will prove to have been wrong that I can see, and that is if the major countries of the world can be brought to agree to follow in concert policies with respect to foreign trade drastically different from those which they seem committed to follow if they act singly. The United States has been urging such agreement upon the United Nations, so far with every appearance of success. If the verbal agreements get translated into binding contractual arrangements, there will be ground for hope that foreign trade will again flourish and expand. If the American program should be rejected or should be allowed to peter out into a collection of polite and empty resolutions, it seems to me that, once the emergency scarcities of the reconstruction period have been met and the accumulated pools of gold and of hard currencies have been spent, foreign trade will shrink to a fraction of its former proportions and what will be left will in the main be conducted in terms of hard bargaining between state foreign-trade monopolies.

All of this, I believe, has very special significance for the United Kingdom, for its prosperity and its very existence, politically and economically, depends more than that of any other of the great industrial countries on its ability to pay by means of exports for a large proportion of the foodstuffs and raw materials which its economy requires.

I am very much aware that one strong current in English public opinion, supported by some English economists, holds that the American program not only fails adequately to meet the special needs of England but threatens to present fatal

obstacles to their being successfully met. It contends that England will be unable to pay for the imports it must have unless she is free to use her bargaining power as a great importer to negotiate bilateral arrangements with supplying countries under which they will agree to take British exports in quantities and at prices sufficient to provide England with the means to pay for the volume of imports she needs. They maintain also that acceptance of the American proposals would mean that England would be tied to a dangerous extent to the American economy with its extreme cyclical swings. They urge that instead England should pursue a policy which insulates her economy from the repercussions of American booms and depressions.

I cannot do more here than indicate briefly what the general nature of my reply to these contentions would be if there were time fully to expound it. The American proposals meet more urgent British than American needs. The English critics of the proposals, I fear, seriously overrate and misinterpret England's "bargaining-power." It is not the urgent necessity of import but the willingness to take or to do without imports in large quantities according to the terms offered which gives great bargaining power. It is the United States, and perhaps Soviet Russia, which have great bargaining-power in this sense, not England. Temporarily, it is true, countries whose economics have long been geared to the British export market can reject the terms England may lay down only at cost of severe hardship for themselves. It is easy to draw up a fairly impressive list of countries which are more-or-less in this situation to-day. But the experience with Germany of many European countries in the 1930's under this method of trade-bargaining has made this situation unpalatable to the lesser partners in such bargains even when the terms offered are generous ones. Even with the countries whose dependence on the British market is to-day most marked, and even though England has no doubt been a generous bargainer, the bargaining has been harder than the English public has been made aware of. In some at least of these countries, in Sweden, in Denmark, and elsewhere also, it is common knowledge that there is fear of the

long-run economic consequences of too great dependence on the British market, and determination to reduce that dependence through shift to new export products, the cultivation of new markets for the old export commodities, and industrialization to lessen the need for imports. An export market in Britain which would seem highly attractive under multilateralism loses much of its charm when it can be entered only on terms reached by bilateral bargaining of the kind which prevailed in the 1930's or which England would be obliged to resort to in a bilateralistic post-war world.

The American economy is an unstable one. Its behaviour from 1929 to 1933 was the result, however, of a combination of stupid mistakes of omission and commission which were without parallel in earlier American history and which are highly unlikely to be matched in the future, in degree at least, if not in kind. It is my belief that, whatever party is in power, no American Government will again permit unemployment to grow to mass proportions without taking strong remedial actions. The American trade proposals involve pledges that these remedial actions shall not take the form of the export of the unemployment elsewhere. It is in the spirit, though not yet in the letter, of the American proposals, moreover, that the menace of mass-unemployment should be met by concerted international action of a positive kind. It is quite in order for Englishmen to make concrete proposals for such action as would be likely to be effective in maintaining or restoring employment without involving extraordinary restrictions on foreign trade, if they believe that the American program is wanting in this regard.

England's problem is a specially difficult one, and the American proposals admittedly do not suffice to provide a guarantee that it can be satisfactorily resolved. But such a guarantee, I fear, is not obtainable by any other route. The nearest thing to a guarantee that I can see would be assurance : 1.—that there shall be good export markets for good British products, well-made, well-designed, and offered at reasonable prices; 2.—that the raw materials and foodstuffs England needs shall be available at competitive prices in open markets ;

and 3,—that England shall obtain, or maintain, a social and economic organization under which her labour power and other productive resources can be effectively converted into goods saleable in the world's markets at remunerative prices. The second and third are conditions which England must take care of on her own. The American proposals are the nearest thing available to-day to an assurance that the first condition can be met. If they fail of acceptance, I see little chance that it can be met by any other means on the scale which England's import requirements makes necessary.

I believe myself that the American proposals, commercial and financial, need further extension, especially in the direction of making provision, perhaps through a new international employment stabilization fund endowed with great capital resources, for concerted international action to cope through international investment with any threatened world depression. But in the light of American history and traditions in the field of international economic relations, the American proposals constitute a much more impressive offer of American economic co-operation with the outside world in general, and with England in particular, than anyone could have predicted or expected only a few years ago. There is no reason whatever why England should not freely propose amendment of particular details which in her opinion do not meet her special needs or are otherwise regarded as faulty, and why she should not demand amplification of the program where such seems expedient. A rejection of the program as a whole would be for England a tragic mistake. A further extension of it along lines making fuller provision for English needs and English fears, but not conflicting with its objectives of multilateralism and of reduction of trade-barriers, is not beyond the negotiating powers of England's able and hard-bargaining diplomats.

JACOB VINER

The Economics of Uniform Pricing Systems

1. THE PROBLEM

In this article, I wish to examine the economics of a system of pricing in which the same price is charged for a product or service over a given area, although the cost of supplying consumers varies from one part of the area to another. An analogous problem which arises when the same price is charged for different services which are supposed to satisfy the same demand but the costs of which differ, for example, different forms of transport between two places, will be left on one side. In this article, I am not concerned with the wider question of whether such a system of pricing ought, or ought not, to be adopted. My aim is simply to discover the economic effects of such a policy.

The view that such uniformity in price is desirable is most often expressed in connection with the public utility industries and derives largely, I believe, from our experience of such a system of pricing in the case of uniform postage charges, although it is necessary to add that the reasons which led Rowland Hill to propose such uniformity are now largely ignored.¹ In the Report of the Committee on Land Utilisation in Rural Areas (the Scott Committee) will be found a very clear statement of the view that such uniformity is desirable. "The supply of electricity is an essential service which in due course should be available in the home of practically every citizen in town and country alike, at no higher price to the consumer in the country than in the town."²

This assumption of the desirability of having uniform prices is commonly associated with the view that the undertaking as a whole should be self-supporting. And if we are to judge by the Government's policy with regard to the coal industry and the electricity supply industry, it seems likely

¹See R. H. Coase, "Rowland Hill and the Penny Post," *Economica*, November, 1939.

²Paragraph 165, pp. 50-51.

that each of the nationalised industries will in fact be run on a self-supporting basis. Mr. Herbert Morrison said in connection with the coal industry: "The Industry is not to be subsidised, either directly or indirectly, and the Board is specifically directed to ensure that its revenue covers its working cost on an average of good and bad years."¹ And it seems that a similar policy is to be adopted in connection with the nationalised electricity supply industry. If therefore a uniform price in nationalised public utility industries is adopted and the service is run on a self-supporting basis, this will mean that if the additional costs of supplying certain groups of consumers, exceed the receipts obtained from those consumers, this will have to be made up by additional payments by other groups of consumers. It is this element of subsidy which has attracted the attention of the critics.²

But the question is more complicated than this. Henry Fawcett, a Postmaster-General who was also an eminent economist, held the view that the rural areas had gained from the uniform postage charge. "He was always eager to improve the mail service to remote towns; and would observe that one good result of State management was a consideration of out-of-the-way places. A private management, he said, might probably have introduced a halfpenny post in London, and have left the country worse served than at present."³ Rowland Hill, whose ideas were responsible for the introduction of uniform postage, who later became a Secretary of the Post Office and whose writings show him to be an economist of considerable stature, took an opposite view. He deplored the abandonment of his original proposals (which had involved an additional charge for distribution in remote areas) because uniform postage charges had had the effect of retarding the extension of the postage service. "As the additional charge would have repaid the cost of extension, the most ostensible as well as the most valid objection thereto would have been removed; and that development might have been rapid which

¹In a speech at Newcastle, on 3rd February, 1946.

²Compare the remarks of Mr. S. R. Dennison in his *Minority Report* to the Scott Committee Report, paragraph 30, p. 109.

³Leslie Stephen, *Life of Henry Fawcett*, pp. 437-438.

was, in fact, lamentably slow.”¹ This raises the question of whether the rural areas, for the benefit of which this arrangement is made, can be said without qualification to be benefited by it. In the next two sections, an attempt will be made to analyse this problem and to decide who gains and who loses as a result of this form of pricing. I shall confine my attention to the case of a public utility and I shall assume that it is operated on a self-supporting basis.

A SIMPLE MODEL ANALYSED

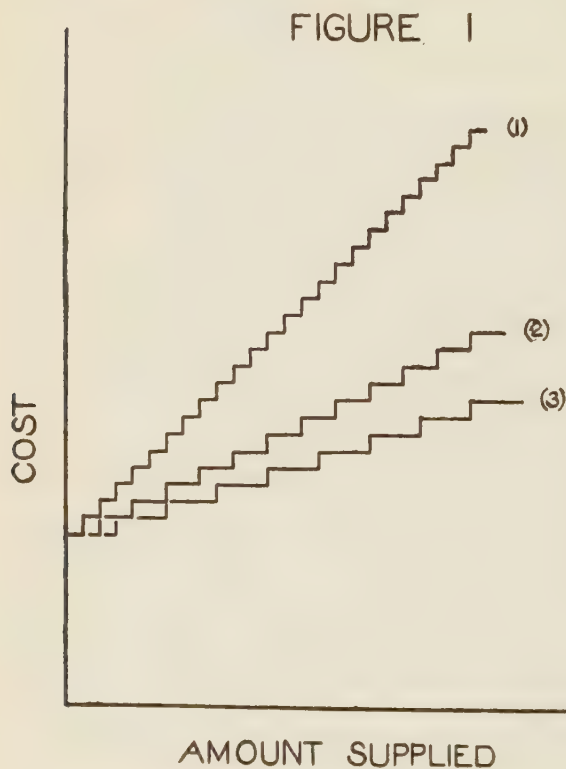
In order to analyse the effects of a uniform pricing system, I propose to construct a model which exhibits the essentials of the problem but which is sufficiently simple for the analysis not to be unduly complicated. Let us assume :

- (1) A public utility is supplying a particular region.
- (2) It has to charge the same price to all consumers in this region.
- (3) Consumers are scattered evenly over the whole area.
- (4) The demand curves of all consumers are the same.
- (5) The marginal costs of supply to each consumer rise with an increase in the distance from the works.
- (6) The marginal costs of supply to each individual consumer are constant, that is, each additional unit consumed by a given consumer adds as much to total costs as did each of the previous units consumed by that consumer.
- (7) All costs are attributable to individual consumers.
- (8) The costs of supply to one consumer are unaffected by the amount supplied to other consumers.
- (9) At the time which is being considered, the public utility has laid down no mains.
- (10) It is bound to supply provided there are mains where the consumer is situated. It is not bound to supply where there are no mains.

In the third section, these limiting assumptions will be removed but it is, I think, convenient to analyse the problem first in connection with a relatively simple case.

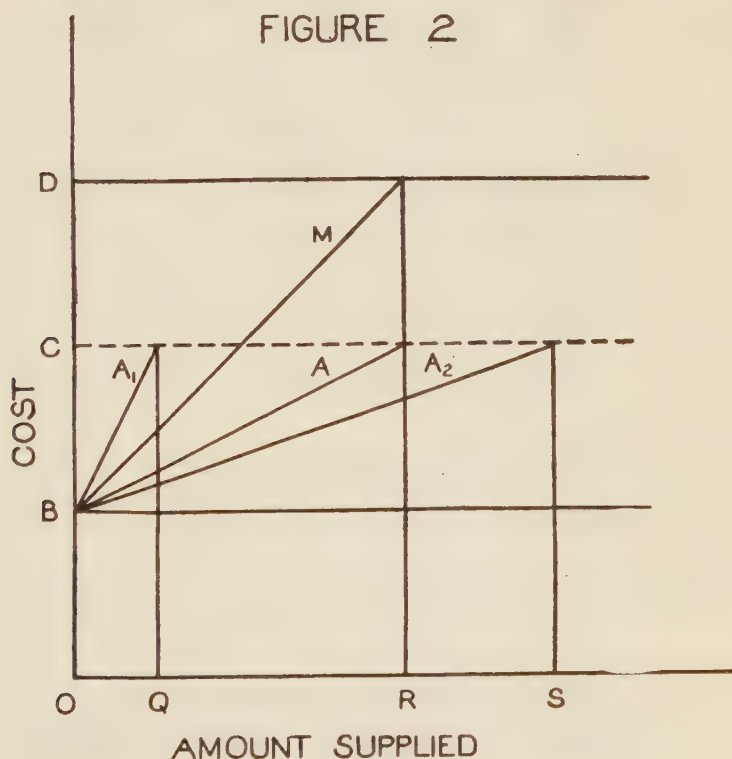
¹See *The Life of Sir Rowland Hill and History of the Penny Post*, by Sir Rowland Hill and George Birkbeck Hill, p. 253.

I shall assume that the service is supplied by mains radiating from the works but to simplify the problem still further, I shall confine my attention to a single spoke of the distribution system. Let us first assume that at the uniform price charged, each consumer demands one unit of the service. Then, if we start with the unit which costs least to supply (that is, the unit demanded by the consumer nearest the works), and then add the unit which is next least costly (that is, the unit demanded by the consumer who is next nearest), we obtain a cost curve of the shape marked (1) in Figure 1. Now assume that the price is reduced and that at this new, and lower price, the demand doubles. That is, each consumer now takes two units. Then we obtain a cost curve of the

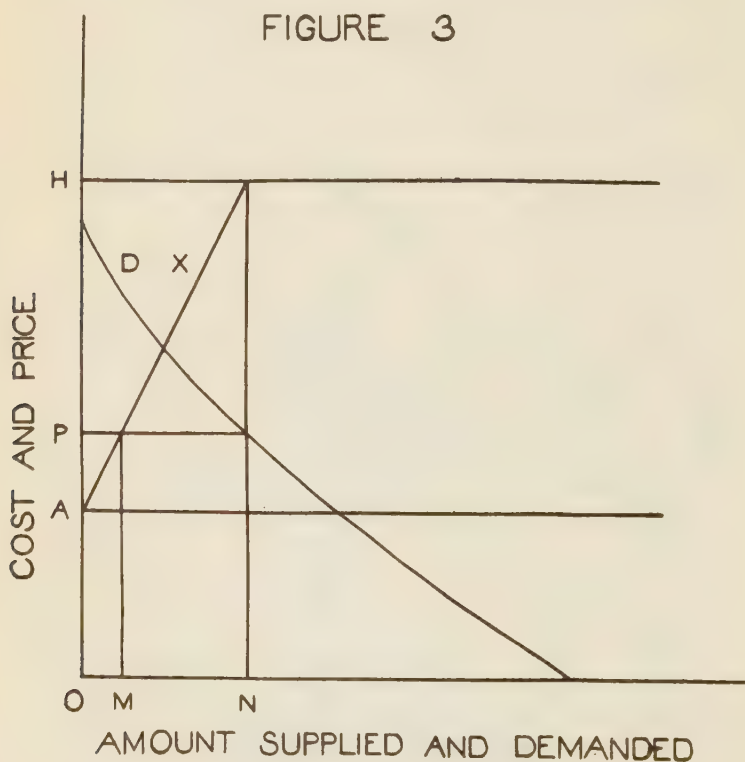


shape marked (2) in Figure 1. Assume that the price is again reduced and that the amount demanded increases to three units per consumer. Then we obtain another cost curve, of the shape marked (3) in Figure 1. We can thus see that if a cost curve is constructed in this way, it will become less steep as the price is lowered and the amount demanded expands.

I shall in the rest of this section ignore the discontinuities and assume that the marginal cost curves in Figure 1 are straight lines. But if the aim of the public utility is not to maximise profits but to be self-supporting (and it is the price policy of such undertakings that I wish to examine), the public utility will make the uniform price which is fixed equal to the average costs of supply. It is therefore to average costs rather



than marginal costs that we must look. If the marginal cost curve drawn up in the way described is a straight line, it is easy to derive an average cost curve from it. The relationship is represented in Figure 2. Assume that OB is the cost of supply to the consumer nearest the works and OD is the cost of supply to the consumer furthest from the works. Then if the amount demanded at the price fixed is OR, the marginal cost curve is M and the average cost curve is A. It will be observed that when all consumers are supplied, the average cost will be OC—equal to the average of OB and OD. But given that we know what the average cost will be if all consumers are supplied and given that we also know that the average cost curve is a straight line starting from OB, it is possible to



derive the average cost curve directly without reference to the marginal cost curve. Thus, if at the price fixed, the amount demanded is OQ , then the average cost curve will be A_1 ; if at the price fixed the amount demanded is OS , the average cost curve will be A_2 . I propose to call the average cost when all consumers are supplied "the highest average cost."

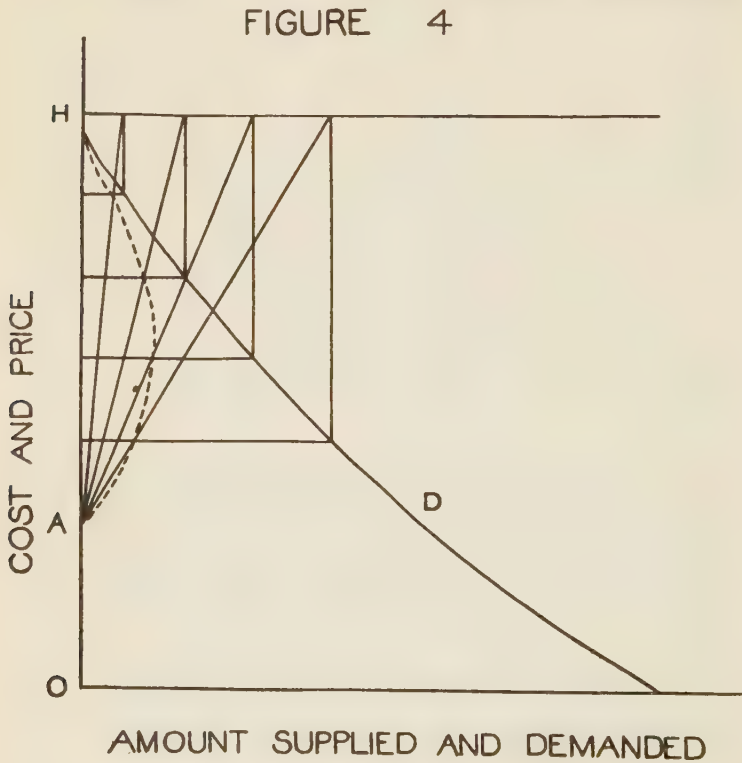
So far we have been concerned simply with the derivation of the cost curve. Let us now take into account the influence of the uniform price. Let the position be as set out in Figure 3. Assume that D is the total demand curve for the service, obtained by adding together the individual demand curves of all consumers along this single spoke of the distribution system wherever they are situated. Let OA be the cost of supply to the consumer nearest the works. Let OH represent "the highest average cost." Assume that the uniform price fixed is OP . Then at this price the amount demanded is ON . The average cost curve, derived in the way described earlier in this article, is the line marked X . What becomes clear from Figure 3 is that it is possible to make average cost equal to price *only* if mains are built to supply the consumers nearest the works who at the price OP would demand OM units of the service. If mains are built to supply more or fewer consumers, it is not possible to equate price with average cost. Given that a uniform price OP is charged (and that the cost conditions are as set out in Figure 3), the public utility will be self-supporting only if it refrains from laying mains to certain consumers.

But the analysis has so far been concerned with the position with one given uniform price. Let us consider how the position is affected as the price which is charged alters. In Figure 4, the effect of alterations in the uniform price can be seen. The dotted line shows the various amounts which the public utility would make arrangements to supply at the different uniform prices.

Of course, in the cases represented in Figures 3 and 4, "the highest average cost"—the average cost when all consumers are supplied—is greater than the price at which

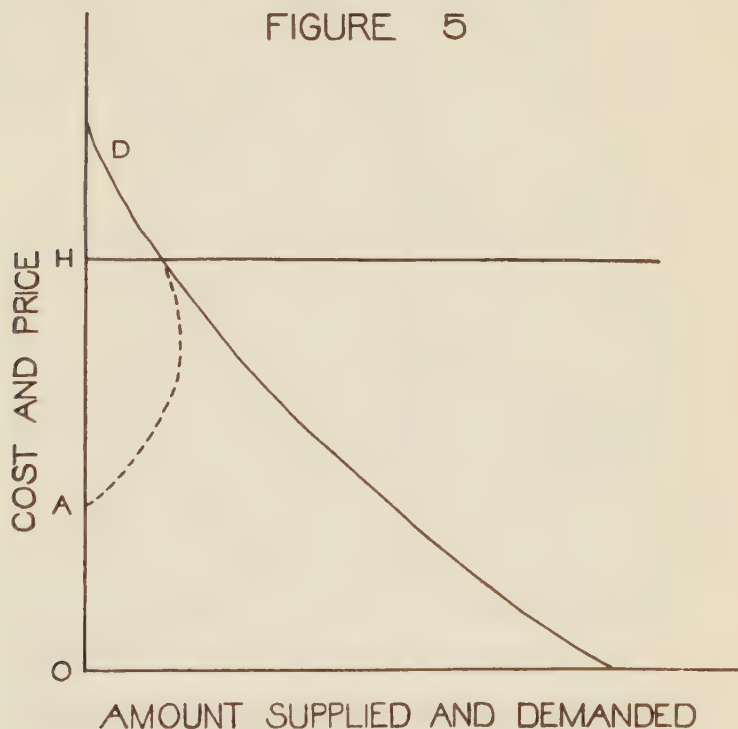
consumers cease to demand. If "the highest average cost" is less than this price, the dotted line which represents the various amounts which the public utility would be willing to supply at different uniform prices would have the shape set out in Figure 5. In this case, it would be possible to supply all consumers at a uniform price, provided that the uniform price is made equal to "the highest average cost."

It will be noted that the effect of raising the uniform price is at first to increase and later to diminish the amount of the service supplied. There are two forces at work. A higher price means that the average cost of supply can be raised and therefore more consumers supplied. But a higher price also means a lessened consumption by those who were previously



supplied at the lower price. At first, the increased number of consumers supplied offsets the reduced demand of those who were previously supplied at the lower price ; but as the number of consumers supplied grows, the effect of this reduced consumption becomes more important and ultimately, it is sufficiently great to offset the growth in the numbers of consumers supplied.

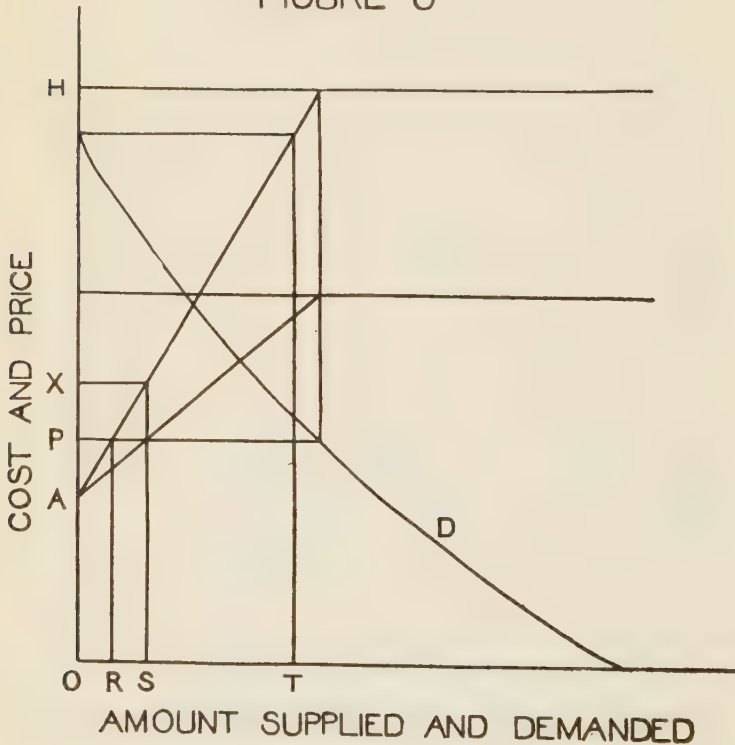
This analysis of a uniform pricing system may be used to throw light on the difference in the opinions held by Henry Fawcett and Rowland Hill concerning the effect of the uniform postage charge on the service provided to rural areas. Let us consider, once again, the diagram setting out the position with



a given uniform price ; but in this case, let both the marginal and the average cost curves be shown. (See Figure 6).

Assume that the price fixed is OP . Then, if the position is as represented in Figure 6, consumers who take OR units will be supplied at a price which is greater than the cost of supplying them while consumers who take RS units will be supplied at a price which is less than the cost of supplying them. I believe Henry Fawcett was thinking of those who consume the units RS when he made his statement. These consumers are clearly benefited by a uniform pricing system. But we have also to take into account the fact that consumers who would demand ST units at price OP are not supplied and that these consumers would demand some of the service at a price

FIGURE 6



which covers the cost of supply in their case. They would not demand as much as ST, of course, at the higher price which would cover the cost of supply to them and since the prices for some consumers would be higher than for others (because the costs of supply differ), they would not demand the same amount. But the fact is that although they would be willing to pay a price equal to the cost of supplying them, they are not supplied. I believe that Rowland Hill was thinking of such consumers—or potential consumers—when he made his statement. These consumers are clearly worse off as a result of a uniform pricing system. Of course, it could be if the elasticity of demand were sufficiently great, so that the service ceased to be demanded at a price below OX, that there would be no consumers who would be willing to pay the cost of supply who do not in fact get a supply. There might indeed be some consumers who would not have been willing to pay the cost of supply in their case but who would be supplied. Perhaps Henry Fawcett thought that this was the position; clearly, Rowland Hill thought it was not.

I should now like to summarise the results which have been reached in the analysis of this simple model. It is clear that the rule that price should be made equal to average cost gives little guide as to what uniform price to charge since the price may be equal to average cost for a range of prices. And the additional criteria which might be used, namely, (a) that the maximum amount of the service should be supplied, and (b) that the maximum number of consumers should be supplied, are not consistent with one another. A uniform pricing system results in some consumers being charged more and some less than the costs of supply to them but it may also be that some consumers who would be willing to pay the costs of supplying them, do not in fact receive a supply. Consequently, some consumers in the high cost areas, for whose benefit uniform pricing is usually thought to be introduced, may in fact be harmed by the adoption of this system of pricing.

In the next section, the rigid assumptions upon which this simple model was constructed will be relaxed and an attempt

will be made to discover in what ways the conclusions reached need to be modified.

3. THE ASSUMPTIONS RELAXED

The first two assumptions set out in the previous section are essential given the nature of the problem. The third assumption, that consumers are scattered evenly over the area, is, however, one the influence of which needs to be examined. Let us assume that the density of population decreases as the distance from the works increases. The analytical construction used in the previous section would be affected in that the cost curve would not rise as fast as assumed in the diagrams until the region is supplied in which the density of population is equal to that assumed in the diagrams, after which, as the density of population continues to fall, it would rise faster than is there assumed. Of course, if the density of population increased as the distance from the works increased, the reverse would be true. The result of relaxing the third assumption is that the cost curves would cease to be straight lines; but otherwise, the form of the analysis (and the main results) would remain unchanged.

The next assumption to be examined is the fourth, that the demand curves of all consumers are the same. This simplifying assumption had two advantages. First, it enabled one to infer something about the behaviour of all consumers from the study of a single demand curve (which greatly simplified the discussion of the conflict of opinion between Henry Fawcett and Rowland Hill). Secondly, it was an essential condition if the cost curves were to be straight lines whatever uniform price was fixed. If this assumption is relaxed, the way in which the cost curves will shift as the price rises will depend on the relative extent to which consumers with differing costs of supply reduce their consumption. The nature of the analysis would not be altered by taking account of this factor. But in one respect, the conclusions reached would be modified. In the previous section, a rise in price resulted in a reduction in the consumption of those who previously bought at the lower price but did not alter the average cost of supplying them. In

consequence, the average cost of supply could be raised to the new, and higher, price only by supplying additional consumers the cost of supply to whom was greater than the average of those already supplied. So the effect of a higher price was to reduce the consumption of those who were already supplied at the lower price but to increase the number of consumers who were supplied. This is no longer true if the elasticities of demand are not the same. The effect of a higher price may be either to raise or lower the average cost of supply to those who previously demanded at the lower price. If the effect of a higher price is to reduce relatively more the consumption of those to whom the costs of supply are low, the average cost of supply to those who consumed at the old price will rise and it could rise so as to be above the new price. Consequently, it would be possible for a higher price to mean not only a lowered supply but also that the number of consumers to whom a supply is given would be reduced. Furthermore, given that the elasticities of demand of the consumers differ, it could be that the number of consumers supplied fall even though the amount supplied increases. And even if the number of consumers supplied increases with a rise in price, the composition of the consumers will tend to alter, since with a higher price, there will be a tendency for some consumers who consumed at a lower price to cease to consume. When this is the case, there will be no uniform price at which it will be possible to supply all consumers ; and this would be so even though all consumers were willing to pay their costs of supply.

The fifth assumption was that the marginal costs of supply to each consumer rise with an increase in the distance from the works. It is of the essence of the problem that there should be differences in the cost of supply to different consumers and it would be necessary to introduce some such assumption in any case. This particular assumption is quite realistic, if only because the density of population normally falls as the distance from the works increases and I do not propose to consider other assumptions which would bring about the same result.

The sixth assumption is that the marginal costs of supply to each individual consumer are constant. In fact, it is

reasonable to suppose that additional units after the first to the same consumer will be less costly. However, this makes no significant difference to the analysis. The marginal cost curve would show considerable discontinuities. But it would still be possible to derive an average cost curve from the marginal cost curve and the rest of the analysis would not be affected.

We now come to the seventh assumption. If there are costs which cannot be attributed to individual consumers, the average cost curve cannot be derived directly from the marginal cost curve. But there is no difficulty in obtaining the total cost (taking account both of the costs which cannot and those which can be attributed to individual consumers) and from this total cost deriving the average cost of whatever quantity is supplied. But one point needs to be noted in this case. Although in the normal case, the marginal cost to the consumers with the highest cost would be above the average cost of supply, in the limiting case, the average cost would be equal to the uniform price at the point at which it is also equal to the cost of supply to the marginal consumer. In this case, no consumer would be supplied at a price which is less than the cost of supply to him. What one could say is that since the marginal cost of supply is greater for some consumers than for others, the price charged would include a greater contribution to overhead costs for some consumers than for others. And the question of whether such an allocation of overhead costs can be considered desirable or undesirable is outside the scope of this article. But it should be noted that this is the limiting, not the normal, case. Normally, the uniform price will be such that the marginal cost of supply to some consumers is greater than the average cost of supply.

The eighth assumption was that the costs of supply to one consumer are unaffected by the amount supplied to other consumers. The removal of this assumption implies that it is not possible to say what the marginal costs of supply are to any one consumer unless one knows what amounts are being supplied to other consumers. This means that it is not possible to draw up a curve showing the marginal costs of

supply in the way that was done in the second section because as additional consumers are supplied, the marginal costs of supplying the consumers nearer the works will alter. But this does not prevent the drawing up of an average cost curve derived from the total costs of supplying the increasing number of consumers. And given that the average costs can be derived, the amount the public utility would want to supply at any given uniform price can also be determined. Once the amount which the public utility would wish to supply is determined, the amount supplied to each consumer is also determined and so therefore are the marginal costs of supply to each consumer. And one would normally expect to find that the marginal costs of supply to some consumers would be greater than the uniform price fixed. It is also clear that given the amount supplied, there may be consumers who, *considered individually*, would be willing to pay the marginal costs of supply to them but who are not supplied. An extended treatment would, of course, be complicated because the marginal costs of supply to any one of the consumers not now supplied would depend on how many others in the same position are also assumed to be supplied. But this does not affect the general conclusion reached in the previous section that there may be some consumers who are not supplied although they would have been willing to pay for the costs of their supply.

There are two assumptions implicit in the analysis which I must now discuss. The first is that in drawing up the cost curves it has been tacitly assumed that in order to supply someone farther from the works, it is necessary to lay mains to those nearer the works. This is, of course, the case when one is dealing with a single spoke of the distribution system. But this is not true when one is dealing with the whole distribution system. Expansion of the area of supply can take place in many directions. It is possible to supply consumers farther off without laying mains to some consumers who are nearer the works and without therefore supplying them with the service. The average cost will be the same if instead of expanding evenly in all directions the public utility expands relatively more in one direction and prevents the rise in average

costs which would otherwise occur by withholding supply to some other consumers in other parts of the area to whom the cost of supply is greater than the average. We thus see that with a given uniform price, the rule that the public utility should be self-supporting does not enable one to determine the area of supply. Price will be equal to average cost with many differing areas of supply.

The other implicit assumption has been that the pricing system does not affect the distribution of population. It will, of course, tend to have some effect. Of itself, a change in the distribution of population would create little difficulty in analysis as we saw when discussing assumption three. It would simply mean that the shapes of the cost curves would be altered. But one point needs to be noted. It is often assumed that a system of uniform pricing will lead to a rise in the average costs of supply because consumers will no longer be deterred from moving to the high cost areas by a higher price for the service. This is, of course, one force which is at work. But there is another. Some consumers in high cost areas who would have been supplied if prices were allowed to reflect costs will not now be supplied and will therefore tend to move to what are relatively low cost areas in order to be supplied. A uniform pricing system may therefore result in either a rise or a fall in the average cost of supply. But since the density of population is likely to be much greater in the low cost areas than in the high cost areas which are not supplied, it seems likely that in general, following the introduction of a uniform pricing system, the forces tending to raise the average cost of supply will prove the stronger.

4. CONCLUSIONS

The conclusions set out at the end of the second section have been amplified rather than altered by the relaxing of the assumptions upon which the simple model was constructed. It was there pointed out that the rule that the price should be made equal to average cost gives little guide as to what uniform price to charge since the price may be equal to average cost for a range of prices. In the third section, it was shown

that with any given uniform price, there will be many different areas of supply for which it would be possible to make the price equal to average cost. In the second section, it was shown that with a given area of supply, the additional criteria that might be used, that the maximum amount of the service should be supplied and that the maximum number of consumers should be supplied, are not consistent with one another. In the third section, it was shown that an increase in the number supplied is not itself an unambiguous criterion, because, owing to differing elasticities of demand, an increase in the number of consumers supplied will often be associated with some consumers ceasing to consume. It would seem that it is incumbent upon those who advocate the adoption of uniform pricing systems to explain what criteria they would use to resolve these conflicts. The conclusion drawn in the second section that there will be some consumers in the high cost areas who would be willing to pay the costs of supplying them but who would not in fact receive a supply if there is a uniform pricing system was shown in this section to hold in general when the rigid assumptions of the earlier section were relaxed. What the third section showed was that there would be consumers in all areas who would be willing to pay the costs of supplying them but who do not obtain the service with a uniform pricing system : in the high cost areas because at the price charged, it does not pay the public utility to supply and in the low cost areas because at the price charged some consumers do not demand the service. It was also shown in this section that although in general a uniform pricing system may tend to raise the average costs of supply, there may be circumstances in which average costs are reduced.

So far no reference has been made to the ninth and tenth assumptions upon which the analysis of the second section was based. The ninth assumption was that no mains have been laid down. The tenth assumption was the usual provision governing public utilities that they must supply consumers where there are mains. It has been assumed up to now that we are dealing with a public utility without commitments to any consumers. Clearly, if a system of distribution is already

in existence, there is no possibility of ceasing to supply consumers to whom mains are already laid. Consequently, there might be no uniform price which did not involve the public utility in a loss. It is even more likely that this would be so with any uniform price which was politically possible since, of course, it would not be possible to make too great an increase in price to existing consumers. In these circumstances, if the public utility aimed at achieving a uniform price and the Government were unwilling to subsidise the industry, this would have to be done gradually by lowering the price to the high cost consumers as costs fall over time with improvements in methods of production and by not lowering them to the low cost consumers. And if the public utility wished to achieve a uniform price as soon as possible, it would have to avoid extending the system into high cost areas—a result which accords ill with the reasons which prompt many of those who support uniform pricing systems.

R. H. COASE

Incentives and Output in the Building and Civil Engineering Industries

1. GENERAL INTRODUCTION

The productivity of any man in a job is the result of his exertions upon his environment. He uses perforce the tools and machinery that he has to hand. What he will or will not do may reasonably be supposed to depend upon (a) his nature or personal attributes, and (b) the totality of his social environment.

These terms, "his nature" and "totality of environment" need to be clearly defined. By the first is meant the expected reactions of a man to the various stimuli of his surroundings, without either a determinist or other explanation of that responsiveness being assumed. By totality of environment is meant the whole of the possible stimuli that may affect the workman.

The worker's effort and the results that he achieves may be influenced by his relations with his workmates, by their capacity for team-work, by the planning ability of the ganger, the clerk of works, or by the head office of the firm for which he works, by the amenities for drying clothes or securing hot meals available at the site and by numerous other factors. Productivity is probably affected by the wage incentive among other things, but all enquiries into industrial psychology, in this and other industries, have suggested that the wage incentive is neither the only, nor always the most important, incentive.

In some of the studies referred to below it will be seen that, during the war years, even the political and the strategic situation may have been an important factor in determining the level of output. Morale may be at least as important in economic organisation as it is in military organisation.

Again, on the management's side there is a less complex but still perhaps not an entirely economic, motivation.

Naturally, profits are the main incentive but it would be misleading to suppose that there not other influences at work. Established builders, both small, medium and large, have been known in all ages to take pride in their work. They share, indeed, some of the pleasures of architecture, and it is a mistake to think that there is a rigid dividing line between the approach of the architect and the builder to the finished product.

2. THE CRAFTSMAN IN INDUSTRY

The special characteristic which colours all industrial issues in the building industry is the high status still enjoyed therein by the traditional craftsman. The effect of this is difficult to measure quantitatively, and it is sometimes thought that the craftsman's status is diminishing. It certainly is changing as certain crafts change in relative importance.

The importance of craftsmen has a direct effect on the organisation of industry. One hesitates to draw definitive conclusions on rather ambiguous statistical information, but certainly the figures of gross value of output per head for different sizes and types of firm in both British and American construction industries appear to be suggestive of some interesting conclusions. The figures in the third column of Table I show that in 1942 gross value of output per operative employed rose with the size of firm, from the third size-group upwards. (The figures for the two smallest size-groups, those employing one and two operatives each, are vitiated by the fact that a significant amount of work in these groups may have been due to working proprietors). For America, comparable figures by size of firm are not available; however, figures for *net* as well as gross output per employee can be calculated by *type* of firm. These are shown in Table II. Since "heavy" contractors, and other groups with high gross output per head, included the larger firms, the table may be said to illustrate the general similarity between the differences of output between American firms, and the differences between British firms. The fact that net output as well as gross output per employee showed similar variations suggests that

the different value of materials used was not the only explanation. In Table I, there is a flattening-out in the improvement in output with size between the ninth and tenth size-groups. The medium-sized employer has the advantage of knowing his men's work individually and of being able to plan his jobs directly from personal knowledge. When the firm grows larger he has to engage quantity surveyors and others to undertake supervision. He has a less close control of the craftsmen's work, less direct understanding of their difficulties and less direct control of the costs and supply of materials. When supervision reaches a really large scale, then its problems may be reduced to manageable proportions and the employer can afford to pay high salaries for experts in the field of supervision and management.

An advantage which the smaller firms have over the medium sized, *i.e.* over those employing 200 to 900 men or so, is that the smaller firms can offer steadier employment for a permanent staff. The medium and larger firm normally engage a substantial part of their labour in the districts where they happen to have contracts. The small man, on the other hand, moves his key employees around from job to job, although he, too, takes on short-term labour more frequently than a small firm might do in other industries.

Thus, in a sample of about 70 firms investigated for the years 1936 to 1938, it was found that the average percentage of "nucleus operatives" was 52 per cent., which means that only half of the total operatives employed by these firms were constantly in the employment of the same firm throughout the three years, but the percentage of such permanent nucleus employees was very much higher for the small firms in the group. Firms employing up to 50 men had a nucleus percentage of 60 per cent. Those with 50 to 200 men had 55 per cent. The next largest group of 200 to 500 men showed 44 per cent., while the large firms with 500 men or more, had a permanent nucleus of only 20 per cent.

The bigger constancy of employment among the small firms is paralleled by the fact that the smaller firms employ by far the highest percentages of craftsmen to total

operatives. These percentages are shown in Table I. On the operatives the notion of craftsmanship has an ambivalent effect. On the one hand it leads to a high respect for quality as well as quantity of output. Thus, the British bricklayer produces a surface finish to his work which is unrivalled in many countries on the Continent. He has such traditions as "putting the best face to London," which means selecting the best surface of each individual brick and making it face outwards. A bricklayer working with bricks of varying shades will match them into a pattern, perhaps rejecting six bricks before he finds one which suits his taste. The skill of British bricklayers is one which bricklayers in other countries either do not need or do not trouble to acquire. Very little data is available on a comparative basis to show how far the quality of British brickbuilding is superior to that done in, say, Russia, Germany or Holland, and it is difficult to see how quality can be properly measured, but it is clear that the British craftsman's approach to his work is bound to sacrifice some quantitative advantages of output in order to acquire a high and conscientious qualitative effect.

These broad observations must be mentioned because they form the essential background to the operatives' mentality. However widespread genuine craftsmanship may or may not have been, the tradition of this craftsmanship is still largely predominant. It influences the employers into a rather negative attitude towards proposals for bonuses or incentives' payments. The first influence is the pride in the quality of work usually shown and an anxiety to see that the unwritten codes of quality shall not be lowered. The second influence is fear that the privileged position of the craftsman will be undermined by improved or modern methods which will have the result of making his particular skill open to competition by the unskilled or semi-skilled labourer. Thirdly, there is a fear that the craftsman will be induced by the application of scientific methods to give more work for the same money, thus undercutting his own comrades. These fears may be called fear of scamping work and fear of exploitation, and both are part of the general fear that the status of craftsmen may be

impugned. Finally, though it is in the background at present, is the fear of "working yourself out of a job," which means that work should be spun out until another job is in sight. This, of course, was much commoner in days of heavy unemployment, but it is still not wholly banished. Numerous statistical illustrations could be given of the falling off of output per head in the last months and weeks of any job, which is associated with this cause, as well as with bad planning.

3. THE EMPLOYERS' POINT OF VIEW

It would not be very sensible to generalise on the precise views on industrial policy held by employers as a whole, because among the leaders of the industry almost every possible shade of opinion exists. There are, however, a few general observations, that are applicable to employers, arising from their economic circumstances. First, the position of the employer in regard to technique is quite different from that of the employer in a factory or works. If a manager in a factory decides that a certain job can best be done by a sequence of operations *a-b-c*, and even a sequence of movements within each operation *d-e-f*, he can simply direct the workers in the way in which the job has to be done. If a new method is involved, he may, it is true, have some difficulties over fixing with the shop steward the rate for the job, but once this has been settled there is no question of his leadership both as to operations and even as to movements. Something of the same sort is true in the civil engineering industry where new plant and new methods are familiar. In the building industry, however, craftsmen regard themselves as the experts on movements and to some extent on operations. They do not normally expect to be told in any detail how the job is to be done. If told, they are usually resistant to the change.

A new method in a factory may be adopted simultaneously by 500 to 1,000 work people. In the building industry it has to percolate, even for a single firm, from site to site.

Thus, the managerial task of arranging a sequence of operations logically is badly hampered in the building industry. It is difficult for the manager even to discover how much time

can be saved by rearrangements of a schedule of operations since he cannot rely on co-operation from the work people in any such rearrangements.

Secondly, it can scarcely be contended that management in the building industry, apart from the practice of a few of the larger firms, is at a high level relative to other industries. Until recently, the attempt to work to a programme or schedule has been the exception. This provides one reason why the employers as a whole do not want a national bonus scheme. They like to use bonuses occasionally when a particular piece of work wants tidying up at short notice, but they do not like to be tied to a system which involves frequent measuring of work and of the amount of progress which formerly they did not trouble to do even for their own information.

Thirdly, the employer in general has been prosperous in 1946 and 1947, and foresees continuous prosperity for several years to come. Employment has been higher than for many years past and there is no prospect of any falling off in demand in the near future. This means that the employers as a class are not now quite so acutely anxious about the level of productivity of their industry as they were in 1944-45, while they are anxious about the danger of introducing new methods which may cause trouble for themselves and industrial unrest among the men. They are, however, desirous that no unforeseen downward *changes* in productivity occur so that any prices they put in for contracts are falsified in the event, thus involving them in direct loss.

Of course, many progressive employers are constantly introducing new methods, but even they are not applying these new methods to all branches of their own work, nor is there any effective machinery within the industry for spreading the use of any tried new method throughout the country.

Fourthly, the exceptional volume of manpower which has been brought into the building industry during the two years since the end of the war, has reduced the extreme anxiety about "man-hour figures" which characterised discussions from 1944 to 1945. In these years manpower was really scarce and the employers were beginning to show some interest in new

techniques for measuring efficiency. Although there are local shortages of labour at present, the manpower position in the industry is extremely easy in contrast to the position in coal mining, agriculture and textiles. To some extent, inevitably, the employers have therefore lost interest in questions of the level of man-hour output, especially as delays in the delivery of materials are, at present, an important factor. It will therefore be seen that conditions in this industry are not particularly appropriate for the ready acceptance of an incentive scheme on a national basis.

4. THE PAYMENT BY RESULTS SCHEME ADOPTED DURING THE WAR

The system of fixing wages in the building industry has been to settle them on a basis of time work with adjustments to changes in the cost of living. This is done by the National Joint Council of the Building Industry, and an hourly rate of wages is agreed for each separate district of the country. Before 1939, in the civil engineering industry, the National Working Rule provided for the payment of bonus in addition to time rates on individual sites, but there was no general scheme of bonusing applicable throughout the industry. In the building industry, the National Working Rule did not accept any system of payment by results, and in some local rules it was expressly prohibited.

In practice, however, private enterprise builders worked largely on a piece-work basis by means of special arrangements between private building firms and their workers. The trade unions have always officially opposed piece-work on the grounds that it led to shoddy work, operated unfairly between one workman and another and gave employers a chance to obtain more work for less pay.

After the outbreak of war, residential building virtually ceased by the spring of 1940, and the dwindling industry was turned over largely to war construction. The Government building programme proceeded almost entirely on a time work basis except for occasional bonus schemes in the civil engineering

industry. These were mainly rewards for increased output unrelated to any measurable quantity of work.

At the beginning of 1941, the general impression existed that output per head in the industry had fallen. Certainly, the volume of work to be done was very large and the draining away of a substantial part of the labour to the Forces or munitions had left behind mainly the older and slower workers.

In June, 1941, when the Essential Works Order for the building and civil engineering industries was issued, the Minister of Labour (Mr. Bevin) made a statement on the provisions relating to payment by results. He said that the method should be adopted as an incentive wherever it was desirable and practicable. The civil engineering side of the industry had always had payments by results to a limited extent, he pointed out, and now the system was to be extended. There would be facilities at the site for union and management to meet and settle any difficulties that arose.¹

The failure of the industries to produce an agreed ² scheme during the months of negotiations that preceded the issue of the Order was hinted at by Clause (4) of the memorandum ³ issued by the Government, which read :—

“In putting forward this scheme the Government desire to give these assurances : (a) if the representatives of the employers and operatives in the industries should, later, as a result of joint negotiations, reach an agreement between themselves on any adaptation of these proposals, which would in the opinion of the Government be more effective in attaining the object” . . . of higher output, the Government would reconsider the scheme. Meanwhile unauthorised departures from the scheme would not be recognised.

The reaction of the leaders of the operatives' unions to the imposition of payment by results system was unreservedly

¹This statement of Mr. Bevin's is summarised in the *Builder* for 20th June, 1941.

²As Mr. Bevin put it : “The effort on airfields and on War Office and Admiralty construction must be speeded up ; there was not time to stop and argue with anybody.”

³*Builder*, 11th July, 1941.

hostile. Mr. Luke Fawcett, President of the Amalgamated Union of Building Trade Workers of Great Britain, said :¹

"Payment by results will, from now onwards be applied to selected building jobs. What must be our method of dealing with the system? We are opposed to it. That opposition has been expressed by the Executive Council of the Union and by the Executive Councils of the other Unions in the Building Industry and by the National Federation of Building Trade Operatives. It has been emphasized in conferences with the employers, and in consultations with the Ministers of Labour and Works and Buildings, and other representatives of the Government Departments concerned."

The hostility of the Unions to payment by results was evidently the main factor in the protracted negotiations that preceded the issue of the Order. The Unions' representatives, however, collaborated with the Government in drawing up some of the schedules, though continually criticising the system of piece-work.

At the end of August, 1941, the National Federation of Building Trades Operatives issued a booklet entitled "The Defence of the Plain-time Rate System." Mr. R. Coppock, General Secretary of the Federation, stated that this booklet recorded "as objectively as possible the whole facts of the case" in connection with the E.W.O. and with the discussions preceding and leading up to it. The booklet made it clear that all through the discussions the Federation had been, and still was, completely opposed to the system of payment by results, and that plain-time remained "a fundamental policy of the organised building workers." "One thing has emerged very clearly," said the booklet, "and that is, that the abandonment of all piece-work should be fairly easy after the war, because we have so strenuously contested every inch of ground . . ."

This particular point of the Unions was met by the Government in the course of later negotiations, and when,

¹*Builder*, 18th July, 1941.

in November, 1941, the system of payment by results was extended to additional operations¹ Clause 4 (c) specifically stated that the scheme "will constitute a recognised 'change of practice' and will be operative only for the period of the war, unless and in so far as it may be continued by joint agreement."

It was announced, at the same time as this extension of the scheme, that the Executives of the Unions in the National Federation of Building Trades Operatives had "agreed to play their part in guiding policy on the application of payment by results."² This decision was implemented at the setting up of an industrial panel, appointed by the Minister of Works.³ Membership of the panel included representatives of the National Federations of Building Trades' Employers and Building Trades' Operatives, of the Federation of Civil Engineering Contractors, and Civil Engineering Conciliation Board (Operatives), and an independent quantity surveyor; chairman of the panel was the Ministry of Works' Director-General, Sir Hugh Beaver.

The extension of the P.B.R. scheme in November evidently marked the end of the Government's attempt to seek an agreed scheme from the industry itself. Clause 4 (a) of the Joint Memorandum reiterated that: "If the representatives of the employers and operatives in the industries, as a result of joint negotiations, at any time reach an agreement between themselves on any adaptation of the proposals . . . the Government will reconsider the present scheme in the light of any such agreement."

Such a reconsideration never had to take place. No alternative scheme was agreed within the industry for the duration of the war, although further extensions and some modifications of detail in the working of the P.B.R. scheme

¹ *Vis.*: to Machine Excavation; Excavation by Hand; Stone Hardware; Concrete Mixing and Placing and all recognised Civil Engineering operations; Pipe-laying; Brickwork; Carpentry and Joinery; Hutting; Plastering; Painting and Glazing.

² *The Builder*, 21st November, 1941, p. 470.

³ *The Builder*, 5th December, 1941, p. 513.

were introduced from time to time as a result of the deliberations of the Government-created P.B.R. panel. The Government's challenge to the industry to produce a scheme was ignored.

5. OPERATIONS AND RESULTS OF THE PAYMENT BY RESULTS SCHEME

On 4th July, 1941, the payment by results scheme was launched. The scheme provided that the bonus system should apply to the following operations :—excavating (machine and hand), stone and hard core, concreting, and bricklaying. For these operations, it was to be applied only to sites scheduled under the Essential Works Order. On such sites, no departure from the scheme was permitted. On other sites, builders and contractors must observe the terms agreed by the industry and bonus schemes must not be operated except in accordance with such agreements.

The contractor's interest was safeguarded in that he was allowed to claim if, owing to lump sum or similar contracts, the cost of the work was adversely affected by the scheme, but it was expected that the increase of output under the scheme would normally more than compensate contractors for any increased outlay.

Under the scheme, bonus was to be payable for all work above a fixed hourly output, calculated on an hourly basis but paid weekly. It was additional to plain time rates. Any hours worked during which the scheme could not be properly applied, because of reasons outside the operative's control were to be paid for at time rates. In addition to the bonus, a guaranteed week was introduced, whereby any workman was entitled to payment by time rates at not less than eight hours each day and four hours on Saturday, during which he was capable of and available for work.

Bonusing was normally arranged by gangs. The rates scheduled were meant to apply in reasonably favourable conditions. Upward adjustments in the rates could be made on sites where conditions were unfavourable. Similarly, for

machine bonusing, the site engineer was given a certain amount of latitude.

At the beginning, workmen were suspicious of the scheme, but reports from sites indicated that once it was established it became popular and workmen generally complained if they could not be put on bonus. A few gangs, particularly those not attaining good output, wanted the whole of the earnings to be shared out equally among the men on the site. This was obviously impossible, since it would have defeated the ends of the scheme.

For some large sites, there was an improvement in output that was readily detectable, together with improved morale due to the increased speed of the men working on bonus which spread to the whole working of the sites.

Figures of the percentages of output over the basic outputs laid down in the Government schedule were collected and analysed. It was found that, on the average, output was some 40 per cent. above the basics laid down in the schedule.¹ For some items, such as erection of huts, where the "basics" were low and where improved teamwork could be developed, a figure as high as 54 per cent. over the basic was attained. In the case of hand excavation, the average attained was + 14 per cent. But the main items, such as brickwork and concreting ran very close to the 40 per cent. figure, on average. Of course, no one can prove that output would have been lower if the scheme had not been introduced, but it is a generally accepted opinion of Government inspectors who worked the scheme and of employers and all operatives during the period of the scheme's working, that, without bonusing of some sort, output would have been lower than in fact it was. A study of results of the scheme over two years showed that fluctuations in output varied mainly with *date*; that is perhaps because the general psychological "tone" of the country was the biggest cause of fluctuating effort.

¹These figures relate to the period March, 1943—August, 1944. The average down to March, 1946, was 34 per cent. above basic but the fall appears to be due to changes in the items bonused.

When the scheme was put into operation in July, 1941, a joint panel of employer and operative representatives with officers of the Ministry of Works was formed, and meetings were held at regular intervals to advise Ministers of problems arising from the schemes.

The Government expressed itself as willing, at any time, to consider any revised scheme, if one could be agreed between the employers and the operatives, but none was forthcoming. In September, 1941, an extension of the scheme was considered since the trade unions' acquiescence in it placed them in an invidious position, and there was a danger of their being looked upon as blacklegs. Unauthorised schemes, apart from the official schedule, were still being operated by some employers, and the trade unions objected to this. It was thought that the scheme should be applicable, where desired, to jobs other than those scheduled under the Essential Works Order. It was on the occasion of the proposed extension being considered that the Government again offered to consider any scheme put forward as a result of agreement between both sides of the industry.

In October, 1941, it became clear that the industry was not likely to produce proposals in the immediate future. The Government decided to extend the scheme to all scheduled sites, to put a stop to all bonusing schemes not in accordance with national agreements, and to include additional operations in the schedule. This was done on 31st October, 1941.¹

The previous assurances with regard to "change of practice," unauthorised schemes, minimum guaranteed wage, and an open door for the industry to devise a scheme if it could, were all repeated.

The scheduled rates took into account the fact that most of the younger men had been called up to the Forces, and that the standard of efficiency of the remainder was therefore probably below the pre-war average. Later, some fifteen more operations were included in the schedule.

¹The additional operations were :—pipe-laying, reinforced steelwork, carpentry and joinery, hutting, plastering, painting and glazing.

The Government continued to operate this scheme until the end of the war, and administrative action was taken to ensure that it should be used as widely as possible. The Minister of Production, for instance, circulated a letter to all Government contracting departments in May, 1942, stressing the importance of the payment by results scheme, and also the importance of scheduling under the Essential Works (Building and Civil Engineering) Order. It was because the Government was placing contracts on such a large scale and for such a large proportion of the industries' work, that, for the first time, a fairly uniform scheme could be operated without undue bureaucratic machinery being set up.

PAYMENT BY RESULTS AND HOUSING

In November, 1944, the scheme was applied to the building of temporary houses. The operatives' representatives agreed to this on the understanding that it was to be regarded as a war-time arrangement, and, similarly, the employers' representatives acquiesced without prejudice to the post-war period. Advisors were appointed by the Ministry of Works to assist in the application of payment by results; in each region of the country. Their task was to visit sites and discuss the practical details of applying the scheme whenever special difficulties arose. Despite the size of the scheme, the staff used on this work was not very large, and it had provided the machinery whereby some firm figures of output were collected on a national basis for the first time.

The application of the scheme to the Agricultural Cottage Programme was discussed in July, 1943. It was decided that this work could not be regarded as limited to war-time, and therefore payment by results could not be made compulsory. It was therefore left as a matter of voluntary arrangement between employer and operative, and was not applied except in a few isolated cases.

In April, 1945, the Ministers of Labour and Works met representatives of the building and civil engineering trades to discuss the possibility of improving output on housing work. It was suggested that payment by results might be accepted

for a two-year emergency period. In July, 1945, however, the operatives' representatives refused to accept the scheme, even for two years, on the ground that it would undermine their negotiating position on wages generally.

The Essential Works Order was not finally abolished until March, 1947, and a new agreement for wages was announced by the National Joint Council of the Building Industry, on 11th December, 1945. This provided a wage increase of 4d. an hour from 1st January, 1946, and it was agreed that output must be increased quickly, at least to the 1938 level. For this purpose, various committees were set up, including a committee to report on an incentive scheme. This committee had issued no report by February, 1947. In January, 1947, the unions demanded a further 6d. per hour increase in craftsmen's wages and this demand has been rejected by the employers.

These facts indicate some of the industrial difficulties that must be overcome before a renewed incentive scheme is introduced into the building industry. Some general points emerge which must be taken into account. First, it is fairly certain that whatever schedule of basic outputs is drawn up, will be criticised by various sections of the industry. It is politically very difficult for either the employers' or the operatives' representatives to accept a schedule officially, and still more difficult for them to devise an agreed one. It would therefore seem that if a new scheme is to be adopted, the schedule must be laid down by some outside authority, either a Government departmental committee, or a specially appointed tribunal. This, however, cannot be done until the operatives' and employers' representatives have agreed to accept in principle the application of a scheme. Secondly, for payment by results to function effectively, there must be some "co-ordinating machinery," much abused as that term has become. Without some advice from whole-time officers (preferably appointed in consultation with the industry), it is difficult to keep the scheme in step all over the country. Thirdly, some of the great practical difficulties in any scheme should be recognised from the start. For instance, while the

war-time scheme was welcomed by unskilled men, it always remained suspect by the craftsmen, who considered that it led to scamped work. There are two remedies for this : inspection by the site engineer or the clerk of works, and the full co-operation of the unions. Another difficulty on the site, is the measurement of work, since the ganger cannot be relied upon to give accurate figures where he is himself sharing in the bonus. Then again, gangs where the workers are elderly or unfit sometimes do not achieve even the basic output and this leads to discontent with the bonus scheme. All these practical points have to be met and overcome. Possibly a less bureaucratic scheme than the war-time schedule might be worked, thus conceding some of the flexibility demanded by the employers, provided that *ad hoc* bonuses were kept roughly in step all over the country. The fundamental objection to bonuses worked out at sites, or at regional conferences is that they would cut across the trade unions' hard-won principle of national-level negotiations.

A commonly reported criticism from the sites was that the scheme could not be applied to every worker on the site, owing to the difficulty of measuring the results of each occupation. Some general bonus for targets passed might be considered to meet this difficulty.

There is a further difficulty, that an incentive scheme is difficult to apply to jobbing and repair work.

As against these difficulties, many practical employers in the industry can testify that the system acts as a strong incentive to output. One large firm has noted that the rivalry created between the gangs is as important a factor as the financial aspect. Some time and trouble is necessary for measuring work, etc., but this is repaid in the speeding up of the work from the employer's point of view. He also has to take more trouble than he would otherwise do, in forming his gangs, since one slow worker in a gang will reduce output out of all proportion to his own slowness, as the other workers resent their output being pulled down.

CONCLUSION

It may be that future improved productivity in the building industry is not bound up with any incentive scheme at all. The statistics collected under the payment by results scheme revealed the very great spread of output obtained by different gangs in the industry. At all times, quite a large proportion of gangs were turning out the basic output or less, while others were producing 50 per cent. or so above the basic. This difference in output is ascribable to numerous causes, such as differences in efficiency of management, flow of materials, and aptitude of the men. Some of these difficulties will persist whether or no an incentive scheme is introduced.

Moreover, it is not possible to give any scientifically adequate description, at this stage of the studies that are being made of the industry, of all the influences which affect productivity with a proper weighting for each. This still remains a matter for practical and instinctive judgment, based on experience.

If, however, an incentive scheme is introduced, some of the lines which it will be necessary to follow have been sufficiently indicated by previous events. The schedule or basis must be laid down from outside. The industry must first be persuaded to accept the principle, then an incentive scheme should be adopted.

Even in our present inadequate state of knowledge it would seem likely that the existence of a nationally agreed incentive scheme, despite its many difficulties, could be successfully operated and would be a sounder basis for an increase in wages than a mere raising of the hourly rate, regardless of its effect on productivity.

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TABLE I

**BUILDING AND CIVIL ENGINEERING INDUSTRIES,
GREAT BRITAIN, NOVEMBER, 1942**

Percentage of craftsmen employed, and value of
gross output per month per operative employed,
by size of firm

Size of Firm :— Employing	Craftsmen ¹ as percentage of total employees %	Gross value ² of output in Nov., 1942 per operative employed £
1 operative	75.4	59.5
2 operatives	77.8	50.1
3 " 	77.9	42.8
4 " 	75.1	43.4
5 " 	74.2	46.5
6—19 " 	68.0	48.1
20—99 " 	55.7	53.1
100—499 " 	42.3	56.1
500—999 " 	30.1	63.0
1,000—4,999 " 	29.4	64.8
5,000 & over " 	17.8	84.9
Average 	47.6	57.6

¹ In "craftsmen" are included joiners and carpenters, bricklayers, slaters and tilers, plasterers, painters, plumbers and glaziers, electricians, and fitters (heating, ventilating and domestic engineering).

² "Output per head" figures for the first two size-groups are probably swollen by the inclusion of the output of working employers in some of these small firms' output.

TABLE II
CONSTRUCTION INDUSTRIES, UNITED STATES, 1939

Gross and Net value of Output per employee, by
type of contractor

Type of Contractor	Gross Output per employee in year \$	Net Output per employee in year \$
Builders	5,341	1,741
General Contractors		
Building	3,861	1,925
Highway	3,661	2,121
Heavy	4,715	2,880
Special Trade Contractors		
Carpentering	4,250	2,709
Electrical	5,255	2,848
Elevator : steel	7,230	3,091
Heating and plumbing	5,296	2,525
Plastering	3,202	2,042
Painting (including paperhanging and decorating)	3,453	2,618
Roofing and sheet metal	4,205	2,322
Masonry	3,215	1,909
Glass	5,672	3,019
Miscellaneous	4,000	2,272
Average	4,210	2,304

“The American Beveridge”

Early in 1942, some months before the Beveridge Committee reported, the National Resources Planning Board of the United States (since deceased) published its report on “Security, Work and Relief Policies.” This did not receive the attention it deserved in this country, owing to our pre-occupations with the war and the Beveridge Report, whose advance publicity held the attention of the public for months before it was printed. To study the American report now is to reopen fundamental questions about our methods of achieving social security, a healthy irritant and stimulant at a time when large sections of the public are sitting back and feeling that “freedom from want” has been handed out to them or even forced on them, and this in spite of Lord Beveridge’s warning that no democracy can achieve social security without great effort.

“Security, Work and Relief Policies”¹ is a vast tome (it weighs 5 lb. 3 oz.). The Beveridge Report is a mere pocket book in comparison. This is partly due to the more careful editing of the latter—S.W.R.P. contains a good deal of unnecessary repetition. But two other reasons are less certainly in the Beveridge Report’s favour. The terms of reference of S.W.R.P. were wider ; and (partly in consequence of this) its recommendations lack the same flavour of once-for-all water-tightness, which made Beveridge a name to conjure with in the dark days of the war.

The S.W.R.P. Committee was appointed to review “a decade of experience in meeting the needs of our disadvantaged citizens through the provision of work, social insurance and public assistance,” while the Beveridge Committee had “to undertake, with special reference to the inter-relation of the schemes, a survey of the existing schemes of social insurance and allied services, including workmen’s compensation, and to make recommendations.” Lord Beveridge, that is, was given a large bias towards producing administrative order out of a number of already well developed “insurance” schemes,

¹Subsequently referred to as S.W.R.P.

to which other forms of social security were to remain subordinate.

Here then we have two national stocktakings, similar in purpose, but affected from the outset by the longer history of social security legislation in this country, by the rather wider scope of the American terms of reference and, most importantly of all, by the very difference in size and structure of the two countries.

Reading S.W.R.P. one is impressed by some striking similarities between America before the New Deal and nineteenth century England. There is the same attitude towards poverty (based on the recent discovery that it is not necessarily a crime), and the same lack of any public aid provision outside the Poor Law and a limited form of Workmen's Compensation. Under the shadow of the great depression the American people covered in a decade the journey that this country made in easy stages over half a century. During that period we had a number of stocktakings, of which the Report of the Royal Commission on the Poor Laws of 1909 and a series of social surveys are the most outstanding. In addition a mass of facts was made available by the administration of the insurance schemes, so that the Beveridge Committee had at its disposal much of the relevant information about social conditions in the country as a whole, which its American counterpart had to build up for itself. Thus S.W.R.P. represents an immense amount of original research carried out, not only by Dr. Eveline Burns' technical staff, but by many others, whose memoranda and surveys are acknowledged in the introduction and referred to extensively throughout the report.

The revelations regarding the extent of poverty and insecurity in the U.S.A.—the richest country in the world—made in S.W.R.P. are as startling and significant as those made here by Charles Booth half a century ago. Yearly income per head averaged as little as \$243 in Alabama (compared with \$848 in Delaware). Between 1933 and 1940 from 10% to 22% of the total population were at any one time dependent upon socially provided income.¹ "The standard

¹S.W.R.P., 245.

of living of the vast majority of several million persons dependent upon general relief is low in the extreme . . . needy families may receive as little as 25% of their budgetary deficiency."¹ It was estimated that in 1940 as many as a million cases were in need of public aid but received none (or at best only surplus commodities).²

Much of this was, of course, caused by unemployment. But the Beveridge Report recognises, and S.W.R.P. lays great emphasis on the fact that unemployment is not the only cause of poverty, so that "full employment" will not eliminate the need for social security schemes. S.W.R.P. estimates that about two-fifths of the households in receipt of public aid in June, 1940, were families in which there was no employable member. Further, where there was an "employable" member, he or she was, in many cases, severely handicapped in finding employment, so that even if full employment were continuously assured, the U.S.A. must still plan for half the public-aided population of 1940, *i.e.*, 3¼ million households. In addition, S.W.R.P.'s estimate of the numbers likely to be unemployed at any one time, in order to provide the flexibility required by changes in demand and method of production, is 5%—8% of the total labour supply. Whereas in Great Britain Insurance Benefits have been the first line of defence against unemployment, backed up later by Unemployment Assistance, the American's first answer to the problem was Relief Works and the Security Wage; statutory insurance against unemployment is a recent innovation, and even now many classes of lower paid workers are outside the scheme.

Another important difference is that in Great Britain, except in the Public Assistance Service, remedial services and services in kind have developed apart from those services which provide cash allowances, whereas in the U.S.A. income maintenance and welfare services have, both in legislation and administration, been closely linked. Many of the States' Workmen's Compensation Laws cover the provision of medical and rehabilitation services. Under certain clauses of the

¹S.W.R.P., 454.

²S.W.R.P., 447.

Social Security Act of 1935, Federal grants were extended to the States for health and welfare services, child welfare, services for crippled children, etc. The Federal Security Agency set up in 1939, of which the Social Security Board formed a part, included also the U.S. Public Health Service, the Office of Education, and (until the U.S. entered the war) the Civilian Conservation Corps and National Youth Administration.

This difference in approach gives depth to the American treatment of the problems of Social Security, but makes the S.W.R.P. Report more unwieldy than its British counterpart. Its recommendations could scarcely have been contained in four such neatly related Acts as those dealing with Family Allowances, Industrial Injuries, National Insurance and—still to come—National Assistance, which represent the present government's version of the Social Security system advocated in the Beveridge Report. But there are, of course, other good reasons why the U.S.A. is not likely to find a solution to its social security problems in such compact legislative action.

The greater homogeneity and smaller population of this country had led Beveridge himself to the belief that "freedom from want is easier in Britain than in U.S.A., in spite of the higher productivity per head and the larger natural resources of the latter country."¹ Three issues complicate the American picture. Firstly, the larger and more varied population of the U.S.A., representing many widely different standards and ways of living, makes more impractical the concept of a National Minimum: a conception which presents difficulties enough in this small country, though it is fundamental to the Beveridge Plan. Secondly, compared with this country, the U.S.A. has a larger proportion of agricultural and independent workers, who are notoriously more difficult to bring into social insurance schemes than urban populations mainly working under contract of service. It is possible that it is the Class II group (self-employed), which may in fact prove the Achilles heel of our own new scheme of National Insurance.

¹"Some Trans-Atlantic Comparisons," *Journal of the Royal Statistical Society*, Part IV, 1943.

Even if it were acceptable, the practical difficulties of administering any such compulsory and comprehensive scheme in the isolated outposts of the American continent would certainly be formidable.

Finally, there is the structure of State and Federal Government to be taken into account. Although one of the chief features of the past decade has been the increasing part played by the Federal Government (so that by 1940 thirteen Social Security agencies were wholly, or in part, a Federal responsibility, and only two purely State or local), the writers of S.W.R.P. are too realistic to under-estimate the part which the States must continue to play in many of the Social Security programmes. It must have been a continual temptation to cut Gordian knots by advocating undivided Federal responsibility, yet this easy solution is rarely resorted to.

SOCIAL INSURANCES

Standing as it does somewhere in between social assistance and commercial insurance, the very conception of social insurance is a somewhat indeterminate fusion of the *quid pro quo* and compensation ideas. Comparison of British and American schemes helps to clarify our ideas and to see our own as just one of the many possible forms which this particular method of securing income maintenance can take.

Beveridge has distinguished the principal elements of social insurance as the providing of cash benefits conditional upon compulsory contributions, the widest possible spreading of risks and the State contribution to the Insurance Fund. The degree to which these different elements are present varies considerably in different countries, the British and American models being as far apart as any. As originally conceived the American social insurances were even nearer to commercial insurance than they are to-day when certain modifications have been introduced. In both the Retirement and Survivors' Pension and Unemployment Compensation schemes, the spreading of risks is not taken so far as on this side of the Atlantic. Workers in domestic, agricultural and other low paid employments, together with employees of

non-profit concerns, including government employees, were not included in either scheme, and employees of small firms were also excluded from the Unemployment Compensation schemes in all but six States. (S.W.R.P. estimates that in 1940 well over half the gainfully occupied population were excluded from both.)

Though payment of contributions by or on behalf of workers in covered employments was compulsory, under the benefit formulas many of those earning wages in covered employment failed to qualify for benefits. Owing to the method by which contributions and benefits are linked to wages, minimum earning requirements may restrict the eligibility for Unemployment Compensation of as many as 17% of all "covered workers"¹; while the other main reason for the failure of workers to secure insured status seemed to be due to a break in contributions on account of unemployment, ill health, or movement between covered and non-covered employment.² Neither of the provisions under the British schemes, which permit "credited" or "franked" contributions for periods of ill health or genuine unemployment, and which allows the person who has been a compulsory contributor for two years on leaving insurable employment, to continue in the Health and Pensions scheme as a voluntary contributor, exist in America.

Whereas contributions to the British Unemployment, Health and Pensions schemes are all on a tripartite basis, with uniform flat rate contributions from employers, employees and the State, in the two American schemes contributions were paid by employers alone (in all but five States) in Unemployment Compensation; and by employers and employees (pay-roll and wage taxes) in Old Age and Survivors' Insurance. There had been up to 1942 no direct subsidising of the Insurance Funds by either State or Federal Governments. Although there was some weighting of the benefit formula in favour of the lower wage earner, the "proportionality principle," relating both contributions and benefits to wages was maintained; under many State Unemployment Compensation laws the

¹S.W.R.P., 212.

²S.W.R.P., 209.

duration as well as the amount of Unemployment Compensation was related to previous earnings experience, while the "merit-rating" system¹ by which employers with low unemployment records were allowed remission on their contributions, decreased still further the extent to which there was the widest sharing of risks, which Beveridge has regarded as fundamental in any social insurance scheme.

Radical changes, however, were made in the Old Age Insurance system introduced in the 1935 Social Security Act, by an important amending Act of 1939: relatively greater benefits were provided for those who had earned low wages or were already in the higher age classes when the system came into operation, allowances for aged wives (over 65) and young dependent children of beneficiaries were provided and survivors' benefits (for widows, orphans or dependent parents) introduced. Thus a virtually compulsory private insurance scheme was converted into a social insurance scheme which emphasised the protection of the family as against the individual. The amending Act also involved changes in the method of financing old age insurance, which may have far reaching consequences. The Act indicated that a much more modest reserve was contemplated and made no direct provision against the time when current yield from contributions at their maximum level (they were to be raised from 1% to 3% of taxable wages—up to \$3,000—by 1948)² should fall short of the annual sum needed for the payment of benefits.

For Railroad workers there were special Unemployment Compensation and Retirement Pension schemes, administered by the Federal Government. The pension scheme gave on the whole rather higher benefits than the general one, providing pensions to those retired on grounds of permanent disability as well as old age, but did not include survivors' benefits. The Unemployment Compensation, only introduced in 1939 and radically altered in 1940, apparently compared unfavourably with the State Unemployment Compensation schemes, to which

¹In its recommendations S.W.R.P. proposes that this system should be abolished. In 1940 it applied in 38 States.

²S.W.R.P., 77.

the Railroad workers belonged until the separate scheme was devised for them.

Although, as in this country, Workmen's Compensation was the predecessor of the other forms of social insurance, in the U.S.A. it is regulated by the States and the Federal Government has no means of encouraging or enforcing uniform standards or improvements. One State (Mississippi) had no Workmen's Compensation law, but in 32 of the States the law was "elective"¹ permitting employers or employees to adopt it or not as they wished. Numerous types of employment and sizes of firms were not covered, not all laws provided compensation for industrial diseases and provision for medical treatment was often inadequate. The result of these various restrictions was that in December, 1938, it was estimated that only 40% of those gainfully occupied were covered.

In 1940 neither the Federal Government nor the States operated any form of Health Insurance.

In making his recommendations, Lord Beveridge accepts social insurance as the chief method of achieving social security and enunciates his "six fundamental principles"² of social insurance, which he applies forthwith (after a brief paragraph devoted to the justification of each) to his unified social insurance scheme, devised to cover the "eight primary causes of need."³ When it comes to its recommendations S.W.R.P. displays a very different temper, its approach is much more cautious and tentative. For example: in considering the introduction of certain modifications into the contributory schemes—"it is not yet clear how far the attempt to modify these features may detract from the peculiar advantages and inner consistency of the system we have now"⁴: of certain developments in the Unemployment Compensation Scheme—"We should like to see further exploration of the payment of dependent's benefits"⁵: of extending the classes to be covered

¹Many "elective" laws are, however, compulsory for hazardous employments.

²Beveridge, 121.

³Beveridge, 124.

⁴S.W.R.P., 515.

⁵S.W.R.P., 516.

by social insurance—"The country may, however, have to face the fact that there are some groups of irregularly employed and low-paid persons whose minimum security cannot be assured through social insurance measures so long as the present benefit and eligibility provisions of the Old Age and Survivors' insurance system are retained."¹

It is evident that there are going to be no deductions from *a priori* principles to a final, comprehensive Plan. Nevertheless, the recommendations² do represent a body of policies and principles in the light of which are suggested certain quite extensive reforms.

Briefly summarised these are that Social Insurance should be extended to include Health Insurance; that Unemployment Insurance should be administered by the Federal Government, and should provide adequate benefits for a uniform period of 26 weeks; that these insurance schemes should be extended to cover all but the lowest paid workers (this extension can be taken further in the case of Old Age Insurance, where the wages overlap is not so dangerous); and that for the two main, characteristically low paid employments (agricultural and domestic), special schemes might be introduced. When all three schemes are administered by the Federal Government further integration will be possible; a small workers' contribution should be made towards each social insurance measure and not only towards one—old age insurance—as at present; and the insurance fund supplemented by money from general tax revenues. Rather surprisingly S.W.R.P. makes no specific recommendations with regard to Workmen's Compensation.

Perhaps the most interesting and illuminating difference between the British and American approach is over the question of coverage. Beveridge and the present Government have seen fit to bring everyone (except those with incomes of less than £104 per annum) into the compulsory social insurance scheme. S.W.R.P. does not consider it a suitable method of assuring social security to many of the lower paid workers

¹S.W.R.P., 516.

²S.W.R.P., 547.

and never for one moment considers the inclusion of the self-employed or non-gainfully occupied.

The "peculiar advantages" of social insurance are emphasised in both the Beveridge and S.W.R.P. Reports: its established popularity; contributors are "claimants" not "applicants"; no means test; no penalising of thrift. From another angle, it is good that "the insured person should not feel that income for idleness, however caused, can come from a bottomless purse,"¹ but rather that there is an actuarial connection between contributions and benefits. At the same time "the direct linkage of benefits and contributions provides at least some measure of control over organised lobbies for excessive liberalisation of benefits."² Finally, there is simplicity of administration in providing social insurance benefits, compared with the individual investigations involved in any assistance scheme.

A careful consideration of these arguments leaves one wondering whether the "inner consistency" of the British scheme of social insurance, particularly as it has taken form in the National Insurance Act, is not so far lost as to be depriving us of the "peculiar advantages" claimed for it. Is Social Insurance, the main feature of the Beveridge Plan (and so much to the forefront of the Government one that when the National Insurance Act came out, the newspaper headlines assured us that the Means Test was abolished once and for all) in fact the most appropriate method of achieving social security for the lowest income groups? Insurance contributions are a consumption tax and S.W.R.P. has a very good section on the restricted use which should be made of this form of regressive taxation as a means of financing Public Aid.³ "The groups to be included in programmes financed in this manner must be selected with great care. Clearly, when present incomes are so low as to provide a bare maintenance, there can be no social justification for forcing the living standard of young or employed persons below this level in order to

¹Beveridge, 12.

²S.W.R.P., 523.

³S.W.R.P., 522.

compel them to save against old age or unemployment." In spite of the substantial contribution to the Insurance Fund from the Exchequer, the contributor's share under the National Insurance Act, is not insignificant (6/2d. rising to 6/6d. for a Class II (self-employed) person, and 4/8d. rising to 5/- for a Class IV (non-employed) person). Beveridge proposed exempting all persons in Classes II and IV, whose income amounted to less than £75 a year, the National Insurance Act has raised this limit to £104. But is this high enough? One is, I think, justified in being a little sceptical as to whether anyone in Classes II or IV with less than £150 per annum is likely to appreciate the "peculiar advantages" of this latest version of British Social Insurance.

S.W.R.P. has a good deal to say about ways in which administration of the social insurances could be simplified, laying particular stress upon the burdens placed upon employers, who under existing schemes make three separate tax returns, and more if they operate in more than one State. Under the Beveridge Scheme unification of social insurance was to bring simplification and decreased administrative costs. But now that the plan is beginning to be put into operation there are ominous signs that these vaunted advantages may be largely illusory. Much will depend on the ability and willingness of the newly insured classes—the self-employed and non-gainfully employed—to meet the contribution requirements. Any large scale defaulting will be difficult to tackle. If the old voluntary contributor failed to stamp his card that was his own affair, his benefits were cut accordingly. It will not be possible to deal with *compulsory* contributors in this simple way.

But it is the Government's decision to abandon Beveridge's transitional scheme and to raise the old age pension immediately which has dealt the severest blow to such "inner consistency" as could still be claimed for our Social Insurance Scheme. The pensioners at present in receipt of 10/- have paid only a very small proportion of their contributory share, yet without any further contribution their benefits have been raised to 26/-. It would seem that there is so little appreciation of at least

one of the "peculiar advantages" of a social insurance system, that it is now open to any powerful lobbying group to secure additional advantages for themselves from an Insurance Fund, which can be so liberally subsidised by the Exchequer. If it could be argued that only in this way could social security be brought to those most needing it, there might be some justification. But, in fact, the effect of these increases is to give more money to a number of people who already possess a reasonable income, and for the poorest pensioners to substitute one kind of pension for another (the existing supplementary pension paid by the Assistance Board).

PUBLIC ASSISTANCE

(a) GENERAL RELIEF.

The American system of general relief had its roots in the English Poor Law, but in a Poor Law which had not yet been subjected to the reforming head of Edwin Chadwick. The modification of local autonomy in the administration of the Poor Laws with the increase in central control introduced in this country in 1834 and considerably strengthened during the last 100 years, gave some sort of a guarantee of minimum standards of efficiency in local administration, which does not exist in the U.S.A. even to-day, where general relief is left entirely to the States and local government units and is administered under a variety of different laws. In 1940 there were 124 counties of eight States, mostly in the South, where there were no general relief programmes.

A special study of general relief standards in 59 widely spread cities in 1940 was made, and measured against an "emergency" budget¹ related to the cost of living in each city. The most striking facts elicited by this enquiry were that in none of the 59 cities was the relief granted sufficient to maintain the family at an "emergency" level of living; in 13 cities the grants were more than 50% below the amount needed and in two the allowances represented less than 20% of the "emergency" level. Even if the distribution of surplus commodities to relief families were added, only two

¹See Appendix 15 for a definition of this "Emergency" Budget.

cities were brought just above the "emergency" standard, and this for food alone. No comparative study for rural areas was possible, but as general relief was more nearly adequate in cities than in other areas, it probably gave a comparatively favourable picture of the situation as a whole.

S.W.R.P. returns continually to the necessity of securing an adequate "underpinning system" of general relief, whatever other social insurance or special assistance schemes are adopted, if the "overall objective of public aid is to be the assurance of access to minimum security for all our people."¹ To achieve this it recommends that the Federal Government should make grants-in-aid for general public assistance, taking into account the differences in need and financial resources as between States, and accompanied by some Federal control (including default powers).

General relief as administered in this country by local Public Assistance Committees supervised (more closely than is the case with most local government services) by the Ministry of Health, doubtless served as a useful model to S.W.R.P. in making these recommendations. Although it is left to each local authority to fix its own scale of relief, the Central Department can insist that this broadly represents a subsistence payment. By its Relief Regulations of 1930 it imposed a certain uniformity in the way in which it is administered, and by Circulars and inspection has suggested more liberal and imaginative treatment of those in receipt of indoor or outdoor relief.

(b) SPECIAL ASSISTANCES.

One of the features of the last decade in the U.S.A. has been the development of special public assistance schemes for the Aged, the Blind and Dependent Children, encouraged by the passing of the Social Security Act, 1935. By extending "matching"² grants-in-aid to States operating approved schemes the Federal Government was able to encourage more liberal and uniform methods of administering assistance. Eight of

¹S.W.R.P., 545.

²A 50% grant up to a federally set maximum payment to each class of recipient.

the 51 jurisdictions failed to qualify for the Federal grants towards their Aid to the Blind programmes and nine for those giving Aid to Dependent Children. The latter, which have got no counterpart in this country, give grants for children under 16 or 18 years of age "who have been deprived of parental support or care by reason of the death, continued absence from the home, or physical or mental incapacity of a parent." They are only paid for children living with certain specified relations in a suitable home.

S.W.R.P. found that the Special Public Assistances compared favourably with the General Relief Schemes, both in adequacy of benefits and methods of administration. The States have, in fact, tended to extend them at the expense of their General Relief systems, since they qualify for Federal grants-in-aid. (In 1940 practically the same expenditure was maintaining nearly three times as many people on General Relief as on Old Age Assistance.) Even so the Special Assistances failed to provide for all those who probably were eligible under the prevailing requirements. The large proportions of "applications pending" in many States (particularly noticeable in the South-East region, where income *per capita* was lowest) usually meant that approval of applications was held up by lack of funds.¹ (Imagine the Assistance Board covering up a failure to meet its obligations in this way!) In spite of Federal regulations there were great variations in the general standards of adequacy and administration in the different States and different programmes. Strong lobbying groups had secured for the aged a considerably more generous provision than was made for dependent children. (The average payment to a mother with two dependent children was only three-quarters as much as that made to a single aged person.)

S.W.R.P. envisages a continuance of these Special Assistance Schemes on a Federal-State basis, but recommends that the Aid given for Dependent Children should be increased and

¹S.W.R.P. estimates that in June, 1940, the reduction of these pending applications would have increased the number of old age recipients by 9% ; of children receiving aid to dependent children by 13% and of recipients of Aid to the Blind by 8%. S.W.R.P., p. 139.

that (as with their recommendations for General Relief) Federal Grants to States should reflect differences in need and fiscal capacity by being paid on a variable, rather than a "matching" basis. Once the Federal Government extends its grants-in-aid to general public assistance, administrative integration of the Special Assistances and general public assistance should be adopted in all States, and not only in a few as at present.

Both in this country and in America the reasons for resorting to Special Assistance schemes seem to be two: to treat certain categories of applicants more generously without increasing the burden on local rates, and to avoid the stigma of the Poor Law. This is to be seen in our own development of Special Assistances. The first, the non-contributory Old Age Pension Scheme of 1908 (a hybrid scheme which looked like a pension in that the old people got a flat rate "pension" of 5/- a week, rather than a varying assistance allowance, but adhered to the assistance principle in that it was only given on proof of need) was entirely financed by the Exchequer. With the introduction of the Supplementary Pension Scheme in 1940, one and a quarter million pensioners applied for and were granted supplementation by the Assistance Board, whereas only a quarter of a million had previously been willing, and able, to get their 10/- pension supplemented from Public Assistance. Pensioned widows with dependent children became eligible for this more popular form of assistance in 1943.

The 1938 Blind Persons Act introduced another form of Special Assistance. In this case the Local Authorities continued to meet the cost of relieving blind persons (doubtless because the numbers involved were not large) but they had to set up special Blind Persons' Welfare Committees, which would not only relieve the blind "not by way of Poor Law," but would give more generous allowances and, by employing special Home Visitors to the Blind, associate certain rather specialised welfare services with the maintenance allowance.

But the two reasons for resorting to a Special Assistance scheme can be seen operating most clearly in relation to the

Unemployed who have exhausted their insurance benefits: the Distressed Workmen's Acts, the Out-of-Work Donations Scheme, the Uncovenanted Benefits and Transitional Payments of the '20's, and finally the Unemployment Assistance Board set up in 1935, all placed the burden of maintaining the unemployed on the Exchequer and reduced to a minimum the number of "Able-bodied" resorting to Public Assistance.

With the introduction of a more comprehensive system of National Insurance, the Government, we understand, has decided to abolish all forms of special assistance and establish a single, general National Assistance scheme. It is, therefore, relevant to ask whether the reasons for Special Assistances are no longer valid. Arguments in favour of relief being administered by local authorities rather than the central government are over-ruled because we have not been successful in finding a satisfactory formula for differential grants to help Local Authorities to meet their relief functions.¹

But the second reason is not so easily disposed of. Will the return to a single, general relief system, administered on a national basis, finally remove the old stigma of the Poor Law? What makes for this stigma, which has persisted in spite of the change of name—from Poor Law, to Public Assistance, to Social Welfare? Many argue that it is simply a carry over from the harshness of the old Poor Law, which people cannot forget in spite of the much more liberal and humane way in which it is administered to-day. But there is another reason for this common reluctance to seek help from the Relieving Officer. In the last resort the State must relieve destitution, even the apparently worthless and thoroughly undesirable characters cannot be left to starve. A general relief body cannot discriminate, and the respectable but unfortunate citizen, who is not entitled to any other kind of benefit or allowance, but clings the more desperately to his good name, shuns any association with the relief body, which is supporting the local "undesirables." It only takes a few of this kind to

¹The burden of Public Assistance rates on local finances is discussed very exhaustively in "The Beveridge Plan and Local Government Finance," J. R. and U. K. Hicks, Manchester Statistical Society Paper, February, 1943.

attach a stigma to the local relief giving body. So far Public Assistance has always had to carry these ne'er-do-wells, (and in an increasing proportion as, one by one, more "worthy" groups of applicants have been removed to the Special Assistances), and to some extent the Relieving Officers naturally adapt their methods to their clients. It is still to be seen whether, when Public Assistance is abolished and these particularly difficult people are, together with the many decent folk still left on Public Assistance, transferred to the National Assistance body, they do not take their infection with them, and bring renewed pressure for the more "respectable" applicants to be treated in special categories.

RELIEF WORK AND WELFARE

S.W.R.P. never regards Unemployment Compensation as providing anything but an interim payment to the Unemployed (for 26 weeks at the most) pending their re-absorption into private employment or "their referral to appropriate work programmes." Reviewing ten years' experience of experimenting in work projects of all kinds, S.W.R.P. is led to the conclusion that "if private industry cannot find jobs for those who are willing and able to work, it is the duty of the Government to do so." And that it can be done, given a willingness on the part of the country to appropriate adequate funds and for careful advance planning of projects by the Federal Government. To achieve this objective S.W.R.P.'s main recommendations are that :

- (1) The Federal Works Agency, charged with responsibility for developing and operating work programmes, should be on a permanent basis, and cease to live from hand-to-mouth on yearly appropriations as it did during the 1930 decade.
- (2) Eligibility for employment on work programmes should be determined by relative employability and need for work and not upon a means test. Selection for work projects should be through the Employment Office and not the General Relief Office.

- (3) Work programmes must necessarily be flexible and highly diversified, but generally speaking standards of performance, rates of remuneration, conditions of work and hours of employment should approximate as far as possible to those prevailing in private employment. Where, however, work projects are primarily used as an instrument for training or retraining, suitable training grants should be paid in lieu of wages. There should be special programmes for young people under 21 and for those with special physical and mental handicaps and disabilities.

Accepting the estimate of 5%—8% unemployment (even with a Full Employment policy), the limited use that can be made of Unemployment Compensation and the general dislike of direct relief to employable persons, S.W.R.P. had no alternative but to go all out for a policy of work relief "as it has operated under Federal leadership." It has set its Government a big task, but it has faced the issues squarely.

By contrast, we whose experience of public works and training schemes has been on an altogether different scale and in a different spirit, have preferred to be more optimistic about the kind of unemployment which is likely to persist even with a Full Employment policy, and about the operation of social insurance. The "Temporary provision as to unemployment benefit" in the much debated Clause 62 of the National Insurance Act¹ suggests that this optimism is not shared by the Government Actuary, and the "inner consistency" of another of our social insurance schemes is sapped as the Exchequer takes over the financial responsibility for this new form of uncovenanted benefit.

The Beveridge Report proposed that after six months' unemployment benefit should be "conditional upon attendance at work or a training centre."² But the recommendation was not accepted by the Government, who preferred the ambiguities of Clause 62, which authorises the Minister to pay unemployment benefit to insured persons after they have "exhausted

¹Came into operation in advance of the Act in February, 1947.

²Beveridge, p. 162.

their right thereto" on the recommendation of a local tribunal, which shall "not proceed on any consideration of the financial resources of the applicant" but "shall have regard to—(a) the particular circumstances of the applicant, including the industrial conditions in the district where he ordinarily resides ; and . . . * At the same time public works remain on the agenda as part of the full employment policy, *i.e.*, as a means of *preventing* unemployment. The Lord President of the Council has recently spoken of "a long list of projects . . . all blue printed and prepared, waiting for investment and man power resources to be made available to carry them out."¹ It will be surprising if, with a much larger variety of works projects available than before the war, accompanied by the present multiplication of training schemes, no attempt is in fact made by the local tribunals to put pressure on any long term unemployed to take part in them ; and American experience in this field may have much of value to teach us.

We may be over optimistic about the long term unemployed. But even if full employment leaves only a few, they are likely to be either cases we can afford to treat generously (*e.g.*, men whose re-employment in a temporarily depressed export industry is envisaged) or cases involving peculiar personal difficulties, where mere generosity is not an answer, but which constitute a welfare problem. The welfare aspect of social security is in fact much more profoundly dealt with in S.W.R.P. than in Beveridge.

The service aspects of Public Aid programmes were first developed in the early Mothers' Aid programmes, and carried over into the Special Assistances for Dependent Children, the Aged and the Blind. F.E.R.A.² Regulations insisted on the appointment of a percentage of personnel trained in social case work. The Social Security Act gave the Federal Government further opportunities of raising standards of services in the Special Assistances, its Children's Bureau has done much to

* (ii) to any general directions issued for the purpose of this section by the Minister for the guidance of local tribunals."

¹Lecture to Institute of Public Administration, October, 1946.

²Federal Emergency Relief Administration, 1933-35.

encourage within local welfare agencies services available to any family—not only those in receipt of public aid. S.W.R.P. recommends that so far as possible health and welfare services should be freely available to the whole population. But this makes it all the more imperative that the local welfare office, to which both special and general assistance applicants will go, should as the basic social service, be intelligently and competently staffed, if those receiving public grants are to be helped to derive the fullest possible benefit from the welfare services provided by other public and private agencies. The part which these latter—the voluntary social services—should play in relation to the statutory services is also considered in this context.

S.W.R.P. is preaching against the divorce of service from cash benefits; a lesson which will be brought home to anyone who studies the development of our Assistance Board from 1935-45, but which is in danger of being forgotten again in the excitement of developing a water-tight social security scheme. During the ten years of its existence the Assistance Board has had the experience of trying to work the somewhat ill-conceived Part II of the Unemployment Assistance Act, which made a half-hearted attempt to develop a system of welfare and rehabilitation for the long term unemployed. It started to operate the Supplementary Pension scheme in 1940 with the injunction that it should conduct its administration "in such manner as may best promote the welfare of pensioners." The mention of the word "welfare" gave rise to considerable misgiving in the House of Commons at the time. But when it is realised that half the total number of supplementary pensioners live alone, and of these about 85,000 are over 80 years of age and 21,000 over 85,¹ it does not need much imagination to realise that the weekly pension paid over the counter at the G.P.O. is not going to bring social security in anything but the narrowest sense to a large number of old people. Between 1940-45 the Assistance Board has built up its welfare service for old people. This, since the statutory powers of the Board, so far as pensioners are concerned, are

¹Report of the Assistance Board for 1944, p. 8.

limited to the payment of supplementary pensions in cash, is necessarily restricted to bringing to the notice of some other authority or organisation, those cases in which their services are needed. But the process of bringing all the various resources of the community to the aid of the individual is an essential part of the welfare worker's function. This fact received rather belated recognition from the Assistance Board when it started training schemes for its investigators and raised their grades. The outside worker, the official who had the closest contact with the client, had been in the earliest days of the Board the least well paid, the person from whom least was expected. When in 1943 the Board took over the responsibility of supplementing the pensions of widows with dependent children it found itself immediately involved in a whole new range of welfare problems.¹

Those who recognise the value of the Assistance Board's Welfare work are concerned as to its future. These services have been made available to the old people and widows because they are applicants for additional "assistance" over and above their statutory rights, and assistance involves a means test. As claimants for the larger insurance benefit (now raised to 26/-) which in most cases will not need supplementation,² their only contact with the Ministry of National Insurance will be by post (eligibility can usually be settled on a form and by reference to the Records department at a Central Office) or at the Post Office, where they draw their pension. Machinery has still to be devised which will associate welfare services, where needed, with an insurance pension as effectively as with an assistance pension.

But Beveridge, sticking more closely to his narrower terms of reference, did not permit himself to become involved in problems such as these, consequently his Report attained a simplicity and completeness, which made it into a best-seller. Without knowing what sort of a reception S.W.R.P. got in

¹Report of the Assistance Board for 1945.

²About 600,000 of a total of 4,100,000 contributory and non-contributory old age pensioners are still receiving supplementary pensions according to the Ministry of National Insurance. (Hansard, 24/10/46.)

America, one would suspect that it was food for specialists and caviare to the general. Popular and sectional interest in problems of Social Security (to judge by the press and the literature of such bodies as the Old Age Pensioners' Association) is usually confined to discussion as to whether it takes 30/- or 40/- a week to abolish want. Other needs and other considerations tend to be ignored by those not immediately concerned, while those who are, are largely inarticulate. By facing all the complexities of the issues involved, even at the expense of its popular appeal, S.W.R.P. may yet have an incalculable influence on those most intimately concerned with the shaping of social security policy in America. While we, on this side of the Atlantic, may awake to the fact that neither Beveridge nor the present Government have said the last word about Social Security in Britain.

B. N. STANCLIFFE

Social Security Developments in the United States

Compliance with the editor's request for an account of developments in social security in America since the publication of the National Resources Planning Board's Report, is no easy task. There has been no comprehensive or codifying legislation since the original Social Security Act of 1935. The American Social Security structure remains a complicated patchwork involving the use of different techniques and the participation of several levels of government. Initially, therefore, it is perhaps well to recall the fact that the Social Security system in the United States embraces both social insurance and public assistance programmes. Social insurance is utilized to provide security for certain groups of workers against unemployment, old age, loss of a breadwinner and physical disability arising out of, or in the course of, employment. Public assistance takes two forms—three special public assistance programmes providing respectively for the aged, blind, and dependent children, and general public assistance which exists everywhere, at least in principle, to meet the needs of those not covered by any of the above measures. All three levels of government participate in one or more of the social security programmes. Old Age and Survivors Insurance, Railroad Retirement and Railroad Unemployment Insurance, are wholly federal programmes and so, apart from a few special measures in individual states, are the security programmes for veterans. Unemployment Compensation and the special public assistances are federal-state programmes in which the character of the laws and general responsibility for administration rest with the states, subject to compliance with certain federal standards as a condition for the receipt of federal grants. The financial responsibility of the federal government is, however, much greater in the second of these two systems. The federal government plays no role in workmen's compensation and general relief or general public assistance. The former is

administered by the states, while the latter is usually a state-local programme, although there are a few cases where general relief is entirely in the hands of the state and others where it is entirely in the hands of the localities.

LEGISLATIVE DEVELOPMENTS

There is little major legislation to report. The Wagner-Murray-Dingell Bill of 1943 which had provided for a nation-wide all-inclusive system of social insurance against the major risks to interruptions of income as well as a comprehensive system of health and medical care met with no response in Congress and no hearings on the Bill ever took place.¹ Despite Presidential urgings of social security expansion in each annual message to the Nation since 1943, Congress has been slow to act, and, until recently, has given really serious attention to social security problems only in connection with the annual debate over the postponement of the scheduled increase in the Old Age and Survivors Insurance tax rate (see below). Faced with this apathy, the proponents for social security extension have tended to concentrate their efforts on piecemeal measures². Thus, during 1944 and 1945 the C.I.O. and other unions vigorously supported bills sponsored by Senator Kilgore for liberalization of unemployment compensation through federal subsidy. While extensive hearings took place, the relative ease with which reconversion was accomplished weakened the public appeal of the measure and, incurring as it did the violent opposition of the states to further federal intervention in this programme, it is not surprising that the Bill was never enacted.

In the same way, the American Public Welfare Association, representing state and local administrators, decided to concentrate on the public assistance programmes and in 1945 and 1946 secured the introduction of the Forand Bill, which embodied and elaborated some of the public assistance provisions of the Wagner-Murray-Dingell Bill of 1943. Despite

¹For a further account of the Bill, its relation to the National Resources Planning Board's Report and some of the reasons for its failure to command Congressional support, see Eveline M. Burns, "Social Security Planning in the United States," *Agenda*, November, 1943.

²In all some 80 separate Bills on different aspects of Social Security were introduced into the House in 1945.

extensive hearings in 1946 the Bill as such was put over until the 1947 session although some of its features were embodied in the Social Security Amending Act of 1946 which will be outlined hereafter.

Meanwhile in March, 1945, the Ways and Means Committee had authorized a special study of the need for amendment of the 1935 Act with special reference to Old Age Insurance. The resulting Report, *Issues in Social Security*¹ was a useful compendium of factual material concerning the current operation of Old Age and Survivors Insurance, Unemployment Compensation and Special Public Assistance, and served as the basis of extensive hearings on comprehensive proposals for amendment of the Social Security Act in Spring, 1946, by the House Ways and Means Committee. Although these hearings and the Report on *Issues in Social Security* are a gold-mine of fact and opinion for the student, the practical outcome was merely the Amending Act of 1946 which in fact dealt only with a few of the many areas in which change is called for. A further study was authorized by the Senate Finance Committee in 1946, but no appointments have yet been made to the Advisory Committee which is to direct the study. In view of the vast body of information already accumulated, however, it is difficult to believe any further investigation is called for. The facts and issues are well known—policy decisions are now required.

The same aversion to a comprehensive legislative programme has characterized developments in the field of health. It is true that in 1944 the Public Health Service Act consolidated and codified the existing laws relating to the Public Health Service. But no action was taken on the comprehensive health programme embodied in the Wagner-Murray-Dingell Bill of 1943. Instead, bills dealing with special aspects of the health problem were introduced, of which the most important dealt respectively with hospital surveys and construction, mental health, maternal and child welfare, dental

¹*Issues in Social Security*; a Report to the Committee on Ways and Means pursuant to H. Res: 204. (79th Congress, 1st Session.) U.S. Government Printing Office, 1946.

treatment and research. Favourable action was taken only on the first two of these. In 1945 a more inclusive measure, the National Health Bill, was introduced in both Houses by Messrs. Wagner, Murray and Dingell and was accompanied by a supporting Presidential message. The Bill proposed federal aid for the extension and improvement of existing health services, as well as a unified system of medical care for needy persons, and plans for a comprehensive, nation-wide health insurance programme for medical care. Hearings on this bill took place in Spring, 1946, but again no action was taken. The changed political complexion of the Congress makes the prospects for enactment of compulsory health insurance even more uncertain. It seems more probable that if there is any federal action it will take the form either of a system of federal grants for general medical service for families and individuals with low incomes, as proposed in a Bill sponsored by Senators Taft, Smith and Ball, or a liberalization of the federal grants to states for special public assistance under the Social Security Act to enable the welfare authorities to give more adequate medical care to recipients of these forms of public aid.¹

The main outcome to date of the attempt to secure a comprehensive attack upon the nation's health problems is the compilation of an immense and valuable body of factual information now embodied in the Hearings on the National Health Bill of 1945-46 and the Hearings of Senator Pepper's Sub-Committee on War-time Health and Education, 1944-45. Here again, the need is not for more facts, but for action.

Individual states have shown considerable interest in health problems. In the last ten years eleven states have introduced (but not passed) bills for compulsory health insurance while seven have created commissions or made surveys of the problem of medical care.

All this is not to say that there is no progress to report. On the contrary, several important federal laws have been enacted. The Social Security Amending Act of 1946 increased

¹The Forand Bill, consideration of which will be resumed in 1947, had proposed federal aid to payments made by the welfare authorities to doctors, institutions, and other agencies furnishing medical care to the needy.

federal grants for special public assistance and, for a limited period, introduced the principle of variable grants whereby the poorer states receive proportionately more federal money. Furthermore, this Act protected the rights of veterans to survivors' insurance benefits and made it possible for the states to extend to seamen the coverage of unemployment compensation laws. During 1946, also, the Crosser Act amended the special insurance programmes for railroad workers, rounding out the system by providing for survivors' benefits and, most significantly of all, introducing permanent and temporary disability benefits. In the third place, a long series of Acts, of which the most important are the Mustering-Out Payment Act and the Servicemen's Readjustment Act, both of 1944, have provided a comprehensive security system for veterans together with a variety of other special benefits. In the fourth place, there have also been new developments in the field of health. The Hospital Surveys and Construction Act of 1946 authorized federal grants to states on a variable basis for surveying and planning their hospital needs and for the construction (but not the maintenance) of public and other non-profit hospitals and public health facilities. The National Mental Health Act of 1946 authorized federal funds for the creating of an Institute of Mental Health to study and treat psychiatric disorders and for grants-in-aid to public and private institutions and to individuals for research and training in this field. Furthermore, in 1943 the Vocational Rehabilitation Act amendments greatly broadened the existing programme and made additional funds available. In the fifth place in 1946 the President's Reorganization Plan No. 2 effected important administrative changes. It abolished the Social Security Board replacing it by the Social Security Administration under the direction of an administrator who is the former chairman of the Board, and brought together under its aegis the welfare and health activities of the Children's Bureau. Further steps toward unifying the security and welfare activities of the federal government were taken by the transfer of the U.S. Employees' Compensation Commission (the body dealing with retirement and related measures for federal employees) to the Federal

Security Administration, the central agency combining the Social Security Administration, the Public Health Service, and the Offices of Education and Vocational Rehabilitation. At the same time the President indicated his intention to ask for legislation raising the status of the Federal Security Administration to that of Cabinet rank. This step would carry into effect one of the recommendations of the National Resources Planning Board. Finally, since 1940 there have been continual amendments to the state unemployment compensation and special public assistance laws which have had the general effect of liberalizing the programmes. Some of these developments will be indicated more fully hereafter.

THE SOCIAL INSURANCES

In Old Age and Survivors Insurance there has been relatively little change. An amendment in 1943 provided for the coverage of seamen who, during the war, were employed by the War Shipping Administration (a necessary step because of the fact that in the original act employees of the federal government were excluded from coverage). The only important legislative development has concerned the financial arrangements. It will be recalled that the 1935 Act had provided for a gradual rise in the original 1% tax on employers and workers at three yearly intervals until both parties were paying 3% of wages. In 1939, this increase was postponed until 1943, but at that time and in every subsequent year, Congress has refused to authorize any increase in the tax above the present combined 2%. This postponement will inevitably at some future time call for a reconsideration of the entire financial basis of the programme and it is highly significant that the Revenue Act of 1943 amended the Social Security Act by authorizing in general terms an appropriation from general revenues to the Trust Fund of "any additional amounts required to finance benefits and payments." Proposals for extension of the system along the lines urged by the National Resources Planning Board and the Social Security Administration have been continually side-tracked by Congress on the ground that these could not receive proper consideration

until the whole question of the future financial basis of the programme had been more fully explored.

The programme for railroad workers is now the most comprehensive of all the social insurances. For workers covered by the Railroad Retirement and Unemployment Insurance Acts, insurance benefits now meet the risks of short period unemployment, old age, death of a breadwinner and temporary and permanent disability. The introduction of the disability payments is of particular importance because, apart from the plans in two states, it is the first large-scale acceptance of this type of compulsory health insurance in the United States and its repercussions on the other security measures may be considerable.

In the last six years, the State Unemployment Insurance laws have undergone more or less continuous amendment.¹ There have been relatively few changes in coverage, although there has been some tendency to include a larger number of employees of small firms.² The average weekly benefit has increased considerably. This is, of course, in part merely a reflection of the high earnings of workers during the war period, since the benefit formula is tied to the wages of the individual worker. But it is also due to the fact that the states have been liberalizing their benefit formulae and there has been a pronounced trend in favour of raising the dollar amounts of both minimum and maximum benefits, especially the latter. The average duration of benefits has also been slowly rising.³

¹For a comprehensive account of all aspects of unemployment compensation, see the special issue of the *Yale Law Journal*, December, 1945.

²It will be recalled that the Social Security Act required only the coverage of employers with eight or more employees. At the present time 22 states have this high exemption, while there are 16 states which cover firms with one or more employees.

³The typical law initially provided for not more than 13 weeks of benefit and related benefit duration to the individual's past earnings so that many workers were entitled to benefits considerably below the prevailing maximum. At the present time over 80% of covered workers are in states with a maximum duration of 20 weeks or more while there are even five states which provide for as many as 26 weeks of benefit. Furthermore, there has been some tendency to abandon the practice of adjusting duration to the individual's wage record and 14 states now provide for a flat duration period.

Whereas these changes have been in the direction of liberalizing unemployment compensation legislation, the tendency has been in the reverse direction in the field of eligibility. There has been a movement in many states, stimulated in part by the desire of employers to benefit from the experience rating provisions (see below), to tighten up on disqualifications so as to limit, or in some cases even to abolish, the benefit rights of workers who refuse suitable work, leave "without cause attributable to the employer" and the like. Finally, there have been important developments in the financial arrangements. It will be recalled that the typical American Unemployment Compensation law is financed by taxes on employers and that already in 1940 thirty-eight states had adopted a system of experience rating whereby employers were permitted to pay reduced taxes under certain circumstances. It was the original intention of these provisions to encourage employers to stabilize employment. Unfortunately, this type of incentive taxation has not achieved the kind of result that its exponents expected. Because the formulae governing benefit reductions tended in general to place emphasis upon a reduction of *compensable* unemployment, rather than unemployment as such, and because it did not prove feasible to adopt a formula which distinguished between that reduction in unemployment attributable to action on the part of the employer and that which arose merely because of a tight labour market and general prosperity, two results have followed. First, employers have become increasingly anxious to secure the adoption of experience rating by all the states, and at the present time only six states are without such provisions. Furthermore, the desire to have "a good employment record" has fostered employer opposition to liberalization and support of such amendments as the disqualification provisions discussed above. Second, since unemployment was very low throughout the war period, practically all employers have become entitled to rate reductions and the average rate of tax in states with these provisions instead of being 2.7% had fallen by 1946 to 1.4%. Thus, as a result, the funds failed to benefit fully from the regular employment and high earnings of the war years. The

Social Security Board has estimated that the loss of revenues in these states attributable to experience rating during 1946 was approximately 51% of the yield at the standard rate.¹ Although twelve states introduced special War Risk provisions, collecting additional taxes from certain employers during the war years, in only one case has the yield of these taxes offset the loss in revenue attributable to experience rating.

The high absolute level of the sums standing to the credit of the states in the Unemployment Trust Fund (\$7.5 billions as of September, 1946) has so far been used as an argument against any cause for alarm. It remains to be seen whether these funds would suffice, with the liberalized laws, to meet the drain of a serious depression, especially in certain individual states. It is true that in 1944 a significant step was taken by providing for federal advances to state unemployment funds when these approached insolvency. The sums available in this loan fund are, however, relatively small. If funds prove insufficient it will become necessary either to cut benefits or to raise taxes at the precise time when their deterrent effect on enterprise and consumption would be most significant.

Unemployment compensation has indeed during recent years been the main bone of contention in the area of social security policy. It will be recalled that both the National Resources Planning Board and the Social Security Administration urged federalization of the unemployment compensation programme and in this they were joined by a considerable number of experts in the field. The growing resistance on the part of the states to "federal encroachment" has unfortunately crystallized around the unemployment compensation programme which has come to assume the significance of a *cause célèbre*. The feeling of states' rights has been so strong that despite an initial presidential veto, the states were able to enforce a return to state operation of the Employment Service (which had been taken over by the federal government for the war period) and this "victory" is now urged as an additional

¹ *Employment Security Activities*, December, 1946. p. 50. Federal Security Agency.

reason for keeping administration of unemployment compensation on a state basis. It seems highly improbable that there will be any change in administration in the near future, especially when it is recalled that employers in general support state administration because they fear (and with some reason) that federal administration will spell the end of experience rating.

PUBLIC ASSISTANCE

No major changes have taken place in general public assistance. In particular, the proposal for a federal grant-in-aid for this programme which was among the major recommendations of the National Resources Planning Board, and has also been urged by the Social Security Administration and the American Public Welfare Association has received no Congressional support. This is largely because the public assistance case load has declined so sharply due to the high employment of recent years and because the financial position of the states and local authorities has, at least temporarily, considerably improved. The problem, in other words, has not seemed to be pressing.

The special public assistance measures for the aged, dependent children and the blind have been steadily liberalized by state action which has taken the form of liberalizing the eligibility requirements, reducing residence requirements, limiting the responsibility of relatives to contribute to support and granting more liberal benefits. Even so, it is doubtful whether the increase has kept pace with the increase in the cost of living (the average monthly old age assistance benefit in September, 1946, was only \$32.15) and the wide disparities in payments and in recipient rates as between the states, and the discrimination against children and young people as compared to the aged, to which the National Resources Planning Board had called attention, still remain. Some improvement may be expected as a result of the Social Security Act Amendments of 1946 which increase the maximum benefit qualifying for a federal grant and provide, by a not very satisfactory formula, for additional federal aid to the poorer states.

VETERANS' SECURITY MEASURES

The security programmes for veterans are extensive and, on the whole, generous. In addition to a capital sum up to \$300 payable on discharge, veterans are entitled, if unemployed, to a maximum of 52 weeks of unemployment benefit at \$20 a week, while self-employed veterans receive for the first year after discharge the difference between monthly net earnings and the sum of \$100. There is also a comprehensive series of pensions for service-incurred disabilities and in needy cases, for non service connected disability of permanent total degree. Free hospitalization and medical care are also available for all service connected disabilities, for disabilities from whatever cause if interfering with vocational training, as well as hospitalization for non-service connected disabilities. The arrangements for loans and grants for the purchase of homes, farms and businesses and for education (taking the form of payment of fees and a subsistence allowance from which some 2.5 million veterans have so far benefited) are perhaps peripheral to social security measures, but should at least be mentioned. As against this must be set the fact that no action has yet been taken (except for those covered by the Railroad Retirement programme) to prevent veterans from a diminution of their old age insurance benefits attributable to absence from covered employment through military service.¹

HEALTH SERVICES

In the field of health, apart from the laws providing federal aid for hospital surveys and construction and for research and training in mental health, only two major public developments call for mention—the adoption of health insurance against income loss due to sickness (disability insurance) for certain groups of workers, and the experience gained in the operation of medical care programmes for veterans and the pregnant wives of service men. It has already been stated that compulsory insurance, both temporary and permanent, was

¹The present formula bases benefits on average wages, whose amount is determined by dividing total life earnings in covered employment by the number of quarters elapsing since entry into insurance. Since no earnings are credited for periods of military service the average wage is reduced.

instituted for railroad workers in 1946. Already in 1942 Rhode Island had instituted a general temporary disability insurance for workers covered by the State Unemployment Compensation law, utilizing the worker's contribution to unemployment insurance to finance the programme. Her example was followed by California in 1946, and the 1946 Social Security Amendments authorized all states to withdraw from the Unemployment Fund any past employee contributions under the parent Act, for this purpose, if they so wished.

The significance of these developments is two-fold. First, disability insurance as such is now a *fait accompli* and it is likely that demands for its extension to other groups will follow.¹ Second, an administrative pattern has been set from which departure will be difficult. Any extension of this type of social insurance is likely to be on a state basis and hopes for a federal programme as embodied in the original Wagner-Murray-Dingell Bill are fast fading.²

The emergency Maternity and Infant Care Programme for the wives of servicemen and the health and hospitalization measures for veterans, may have important repercussions in the field of health care. The former, although now insignificant, at its peak cared for one in seven of all births and considerable experience was gained in the administrative aspects of a system providing free antepartum, obstetrical and postpartum care, by a physician and in a hospital both of the patient's choice. Similarly, the reorganization and development of the medical services administered by the Veterans' Administration under the vigorous leadership of General Omar Bradley may, when it is recalled that veterans now number 17.8 millions (almost 14 million from World

¹Already by the end of 1946 several states were considering the introduction of disability insurance in connection with their unemployment compensation laws.

²For an account of the experience to date in California and Rhode Island see "Cash Sickness Funds in Rhode Island and California," *Social Security Bulletin*, October, 1946, pp. 43—46, and "Recent Developments in Rhode Island Cash Sickness Benefits," *Monthly Labor Review*, July, 1946, p. 22 ff and "Cash Disability Benefits in California," *Ibid*, August 1946, p. 236 ff.

War II) serve to dispel the common belief that publicly provided medical care is inevitably incompetent and sub-standard.

Privately organized developments in the field of health present a sharp contrast to the slow progress in public health measures. The Blue Cross Hospital plan, which enrolls voluntary members who in return for annual premiums receive the right to hospital care, technical services, and limited medical attention in connection with hospitalization, has mushroomed astonishingly. In 1940 there were 71 plans in operation with an enrolment of under 4.5 million. By July, 1946, membership had increased to 23 million, the largest proportion being drawn from the major cities. The scope of the benefits afforded under these plans has also steadily broadened.¹

At the same time the medical profession in various states, stimulated by the threat of compulsory public health insurance, has been organizing private, medically controlled voluntary health insurance restricted in membership to the lower income groups. By 1946 some 31 medical plans had an enrolment of around 2 million members, although 40% of the membership was in one state (Michigan). The Health Insurance Plan of Greater New York is an interesting example of a new type of voluntary plan in that the initiative was taken by the city administration and participation involves willingness on the part of employers to pay half the premiums.

Finally the future is likely to witness a movement on the part of other unions to emulate the example of the United Mineworkers in embodying in the union contract a health and welfare fund, financed by a levy on employers or output.

It seems unlikely that these three types of private action will ever prove an adequate substitute for a public programme with comprehensive coverage. Valuable experience may be gained in the operation of large scale measures and the public and the medical profession may become more accustomed to the use of the insurance technique in the field of health, but

¹For a brief account of the Blue Cross movement see Nathan Sinai, O. W. Anderson and Melvin L. Dollar, "Health Insurance in the United States, 1946" *passim*.

for the longer run the existence of these private programmes has a serious consequence. At best it results in a weakening of the support for an adequate public programme—at worst it has created a group of vested interests who will oppose a public system because of the threat it will offer to the existence of the voluntary plans.

CONCLUSION

It will be seen from the above account of the individual programmes that a number of important problems still call for attention in the United States. In the first place, there are still two major gaps in basic protection. Since the expiration of the federal work relief programmes in 1943 no measures exist or, so far as is known, are being planned, to provide for unemployed workers who have exhausted employment insurance benefit or who are not covered by unemployment insurance laws. While the problem is at present statistically insignificant, any serious depression would find America as unprepared to meet the problem of the long-period unemployed as she was in 1930. Furthermore, the general relief system is still essentially as it was at the time of the National Resources Planning Board's Report. Though general relief is assumed to be the basic residual system to provide security for all those not benefiting from the other social security laws, in many parts of the country it is still an incompletely developed service, inadequately financed and administered on a deterrent basis. Here, too, the present prosperity has deflected interest away from the inadequacies revealed by the National Resources Planning Board's Report. The fact remains that if this system were again to be called upon to meet the demands accompanying a recession, it would be as ill-prepared as it was in 1940. There is still no guarantee that any individual in need can receive some form of public aid wherever he may be in the United States.

The gaps in protection in the area of income security are thus very significant. In the area of health services, the absence of comprehensive provision is even more pronounced. All attempts to secure a compulsory health insurance programme

affording medical care have so far failed, and, given the strong opposition of the American Medical Association and the general lack of interest of the Republican party in this type of legislation, it seems safe to prophesy that for many years to come, the American Social Security system will contain no provisions for either comprehensive compulsory health insurance or a national health service of the kind now adopted in Great Britain.

In the second place, there is still a failure to extend the principle of social insurance to cover all the risks to income commonly provided for in most other countries of comparable economic development. Except for workers in the states of Rhode Island and California and in the railroad industry, there is no health insurance programme against income loss, although it seems likely that a few individual states may develop such measures in connection with their unemployment insurance legislation, the prospects for general coverage of workers by health insurance are dim.

Nor has the coverage of old age and survivors' insurance and unemployment insurance been extended as yet to all workers. Important groups, and notably those in agriculture, in domestic service and the self-employed, as well as federal and state employees are excluded from the benefits of these systems. Quite apart from the inequities involved (through both absence of protection and the liability of uncovered workers to share in the increased prices attributable to such part of the payroll taxes as employers can shift), incomplete coverage has other disadvantages. In a country where workers move so freely between covered and uncovered employment, there are many who suffer a loss of benefit rights or a diminution of monthly benefits as a result of periods of work in uncovered employment. Furthermore the incomplete coverage of the programme is used in some quarters as an argument against a federal contribution from general tax funds.

In the third place, there has been a growing dissatisfaction with the level of benefits afforded by the social insurance legislation. Although unemployment insurance benefits are geared to recent earnings and therefore quite speedily reflect the general increase in earnings of recent years, higher paid

workers have been dissatisfied by the ceiling to benefits represented by the legal dollar maximums. In the case of Old Age and Survivors Insurance the formula adopted causes benefits always to lag behind wage increases and, with the higher levels of living costs, not only the \$10 monthly minimum, but also the average monthly benefit received (\$24.80) is now recognized as clearly inadequate for maintenance. This dissatisfaction will be intensified if coverage is extended to include such typically low paid workers as agricultural employees and domestic servants. Ultimately, it would seem that America will have to seek a new reconciliation between the two divergent principles now operating in its social security system namely—the desire for adequate benefits and the desire to relate benefits to the individual's past earnings. This reconciliation will not be easy in a country characterized by such wide geographical and occupational variations in wage levels and standards of living.

In the fourth place, important financial questions must be faced. Reference has already been made to the problem created by the continual postponement of the tax increase under the Old Age and Survivors Insurance programme. The general question of the desirability of a contribution from general tax revenues will be raised in an acute form if benefits are liberalized and if new risks (such as disability insurance) are added. Some indication of the economic realities can be obtained from the fact that the new railroad retirement system involves ultimately a combined payroll tax on employers and workers as high as 15½%. Such a rate of tax may be feasible in a monopoly industry that can secure government sanction for an increase in prices, though even here there may be serious adverse economic repercussions. It is highly doubtful whether taxes at this level can be levied throughout industry as a whole without giving rise to a demand for a government contribution. Furthermore, it seems inevitable that any serious and prolonged unemployment would give rise to similar demands in connection with unemployment insurance.

In the fifth place, it is likely that the future will witness new developments in the special public assistance measures.

At the present time these are essentially general relief programmes limited to certain classes, differing from general relief only in that, thanks to the federal grant, benefits are higher, eligibility conditions more liberal and the spirit of administration is more sympathetic to the individual recipient. If a federal grant-in-aid were ever to be made available for general relief, the desirability of maintaining four special categories of public assistance would be questioned. Already there are faint signs in individual states of a move to modify special public assistance programmes in the direction of the English 1908 old age pensions law, with money amounts of assistance being written into the legislation and more objective, legislatively determined, criteria of eligibility. Here, the need is for clarification as to the precise objectives sought by this particular type of social security programme.

Finally, it is doubtful whether the last has been heard of the long dispute as to administrative responsibility for the unemployment compensation laws. So long as there is no depression, state administration is likely to continue. A prolonged depression might, however, create an entirely new situation.

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A Note on the Merchanting of Lancashire Cotton Goods

It is not difficult to understand the view of the critic that the Lancashire merchanting system is untidy, the number of merchants apparently too large and the stake of many converters in particular markets is too small for efficiency. These criticisms are natural and they can only be replied to satisfactorily if it can be shown that such untidiness is unavoidable, that the merchanting system does, in fact, secure as much business for Lancashire as could be obtained in any other way, does not charge too much for doing this and does not cripple the industry through internal competition.

First, let us note that the industry is unavoidably complex—it takes portions of a dozen cotton crops, which vary from year to year in quantity and quality, produces a large variety of yarns ranging in fineness from $\frac{1}{8}$ s to, say, 140s, some being doubled or trebled, some being dyed or bleached before, during or after the spinning process, some being doubled in combinations of colours, some being mercerised, some esterified, some being mixed with other fibres either before spinning or by doubling. Some are made in forms suited for hosiery or lace or for sewing or embroidery, or smallware looms, or wrapping wires and cables, or making string, cordage or rope, or fishing nets, some for weaving on hand looms in native markets, some for weaving in woollen mixture cloths, some for narrow fabric looms; some, made from cotton waste, for use in flannelettes, furnishings, or cotton blankets. Of all these, varying proportions are exported in annually varying quantities to countries all over the world. So much for the diversity before we consider weaving at all, a diversity which arises not from disorder but from the wide serviceability of the material and the varieties of human techniques. Nor could these demands be quantitatively established without stabilising human demands, freezing tastes and fashion and preventing industrial change at home and abroad. In short, it is evident that before we reach the cloth stage we already have a shifting base of

yarn supply, where many demands other than cloth provide work for the spinner and vary the types and quantities of yarns available for weaving.

Now let us look at piece goods. Here is a list of fifty types jotted at random in twenty minutes. It could be expanded five or perhaps tenfold.

Sleeve linings, overcoat linings, pocketings, canvas interlinings, hat and cap linings,

Heavy overall cloths, household overall cloths, *nurses' uniform cloths*, butchers' apron cloths, cloths for hospital and institution inmates,

Printed cambrics, gingham, organdies, piques, *muslins*, Poplin shirtings, printed shirtings, cellular shirtings, flannelette shirtings, dyed work shirtings,

Folk weaves, *chintzes*, velours, brocades, plushes, Striped flannelette pyjama cloths, winceyettes, lingerie sateens, *underwear facing cloths*, flannelettes,

Gaberdines, raincoat linings, oilskin cloths, rubberising cloths for mackintoshes, umbrella cloths,

Velveteens, moleskins, corduroys, suedes, Bedford cords, Awning canvas, sailcloth, *conveyor belt cloth*, tarpaulins, driving bolts and ropes,

Corset cloths, collar cloths, typewriter ribbon cloths, *dress waistcoatings*, book cloths.

These are all familiar home trade cloths. We have not mentioned household textiles, sheets, tablecloths, towels, etc., a big class, or special cloths made for footwear, for industry, for railway and steamship companies at home and abroad, cloths for agriculture, cloths for toys, for furniture, for eiderdowns. Nor have we mentioned the immense ranges of cloths made specially for native markets, for wear in the tropics or for the use of the Services.

The first point to note is that each of these items represents not one cloth but many cloths which differ in quality and price. To show what this means let us consider a random selection from this list of 50. We have taken every 7th item.

Sleeve linings—these include cloths for cheap infants' coats, men's suits (several qualities), gaberdine raincoats and

strong cloths for officers' and policemen's greatcoats. They have important export trade.

Nurses' Uniform cloths. These are yarn dyed, in fast colours—the leading hospitals and nursing associations each have their own standard colours to distinguish sisters, nurses, probationers and auxiliary staff. Three or four firms do the bulk of the trade, carry the designs—various checks, stripes and plains, in stock and maintain a high standard. Cloth must be ordered six to nine months ahead of demand. Hospitals in the Dominions and Colonies are supplied. A special type of this cloth is used for cooks' washable trousers in the Merchant Navy. Some standardisation has been achieved during the war, but might be reversed by a demand for brighter functional clothing.

Muslins vary in fineness and closeness of weave. There are also fancy weaves for curtains and blouses, *e.g.* spot muslin ; one type is used for infants' napkins ; other types are used by bookbinders, and for flags and decorations : probably the biggest use nowadays is for export.

Chintzes. A pedigree British production. Designs cost £20 to £50, and blocks or rollers up to £100 or more. Designs run for many years and may be revived to meet vogues for Victorian or Georgian styles. The leading firms carry stock ranges to meet world demand. There are cheaper qualities with less elaborate designs.

Underwear facing cloths. Used for the tops and buttonhole strips of woollen underwear and for children's bodices. They are soft and wool-like in appearance and handle. There are two or three weights and the colours must match the underwear.

Velveteens. These have a seasonal trade and are slow weaving. They must be planned many months ahead. They range from expensive types for ladies' outerwear to cheaper cloths for kiddies' suits, infants' coats and jewel cases. They can now be crease-resisted and a revival of demand is not unlikely.

Conveyor belt cloths. These have been evolved principally since the last war. They vary in width and range from light

canvases used in tailoring and light industries to heavy rubberised types used in handling coal, ores and scrap metals.

Dress waistcoatings. These are a technically superb product of Lancashire weaving and supplement gaberdines, shirtings and fine linings as cotton's contribution to our world leadership in men's clothing. They are stocked in many different weaves and several qualities for world markets.

One could deal similarly with every item on the list. But perhaps this sample will serve. It is clear that the 50 types mentioned each break down into a number of sub-types at the loom stage and usually into still more varieties after finishing. (Each design in the chintz, for example, represents a separate commercial risk for the producer which is not undertaken lightly ; to meet world needs, however, a good range is desirable, hence the number of firms producing chintzes is small). Thus we establish the fact that Lancashire's trade consists in reality of many thousands of commercially distinct sub-types which serve a legitimate need. For each of these sub-types one or more converters—the number is never large unless the trade is large—takes a risk, studies demand, price and sources of supply. The number of merchants, therefore, depends, in practice, on the number of sub-types which can be efficiently handled by a single firm and this depends, in turn, on the skill required in styling, buying, stock-control and marketing. In the bigger firms this is achieved by departmental specialisation, but it is extremely difficult to maintain a high standard of efficiency and initiative in all departments and the small firm which specialises has often greater success in its field than the department of a large firm, since its brains, organisation and policy are shaped to serve a particular demand.

One aspect is important. Consumer goods cater for widely varying incomes. Generally speaking, a firm must pick a level of quality and stick to it. The scale of production, the type of styling and above all the channels of distribution vary considerably at different levels. This means that for a given type, say folk-weave furnishings, the trade is naturally divided among a number of firms, many of which are quite non-competitive.

The brief survey already made gives *raison d'être* for a very considerable number of merchants. The technique of controlling and developing the thousands of sub-types and qualities has to be performed by suitably sized units and it may be no true benefit to the industry if these units are forced into being departments of large firms.

Now for a word on the export side. There are 77 separate markets listed on the industry's export questionnaires. Each of these markets has its own peculiarities. Even for "home trade" markets such as Sweden, Denmark and Norway, about half the cloths exported differ from cloths made for the home market in some respect—weave, width or design, and the markets differ considerably from each other. For "export" markets such as West Africa, India and the Argentine, home market cloths are a very small proportion. Hence, the number of sub-types is greatly increased by export demand. Also, while many home market cloths are saleable overseas, different countries prefer different types. Thus Denmark may like cotton and rayon mixtures, Norway gingham and Sweden good prints. Hence, converters of different home market sub-types must establish different export affiliations. They find by trial and error which markets are attractive and are able to include in or add to their ranges designs and colourings likely to be saleable. Frequently by advance sampling they are able to include overseas orders in their bulk production.

An increasing proportion of the industry's export trade is marginal—*i.e.* supplementary to domestic production in the market concerned. It depends less and less on bulk and long runs and increasingly on variety. Hence our ability to offer diversity of sub-types is a great advantage. We are able to offer, what the Japanese and the domestic industry cannot—exclusive styles to distributors. The department store, the chain store, the big makers-up and the wholesalers (who supply small drapers) are all able to buy something different from their competitors. There is no single channel of distribution, hence our ranges are very difficult to copy. We do not have the disadvantage of America's leading woollen company, whose

new range each spring is used as a basis for placing orders with competitors.

Knowing what our own department stores and retailers attach to having something different from each other it is certain that we obtain appreciably more business and a firmer goodwill in marginal markets from our varied ranges than we should obtain by telescoping them into a few bulk production styles at slightly lower prices. Indeed we already have bulk production styles run by a few big firms who produce cheap cloths in bulk for world-wide sale in chain stores and bazaars. We may doubt whether any appreciable increase in volume could be made on these cloths by eliminating more varied ranges.

It is quite erroneous to assume that an exporter shown in the returns as small is necessarily inefficient. One manufacturer of a profitable speciality is only able to put down a big production order by collecting small orders from a dozen overseas markets and adding them to his order for home trade.

Some of our finest linings and dress waistcoatings are carried by London or Bradford travellers in the highest class woollen goods to bespoke tailors in the world's capitals. In both cases the recorded sales to the individual countries by the firms concerned must be ridiculously small. But the trade is profitable and almost non-competitive. Especially at the quality end of the trade, such a scatter of small orders is very frequent. Similar cases arise where a shipper dealing in a big way with a particular market as a converter is asked to supply a small quantity of a speciality cloth. Here it may be more economical to buy the cloth from a converter producing it in bulk than to have it specially woven and finished as a small lot. According to returns, however, the converter counts as the exporter and it would appear that he was dealing with the particular market in a very small way. The same phenomenon appears even more strikingly in small markets where the requirements may be varied but the quantities are small. It would clearly be wasteful for each converter to have a separate agent with a multiplication of credit enquiries and remittances. Here one or two experienced shippers make selections from the

standard lines of many converters and cater for the market's needs through one or two established importers, a miscellany of goods being shipped in bulk at regular intervals. The criterion here is not the number and size of converters' sales to the market, but the number of shippers.

We need not feel concerned about the cost of merchanting. Competition tends constantly to develop trade through the most economical channels. We must not forget that big buyers are usually keenly interested in price and know how to buy.

It is easy to over-estimate the advantages of verticalisation. If demand for each sub-type was stable, it would be safe to recommend it. But the changes in demand due to fashion, technical progress, trade fluctuation, tariffs and competition were unpredictable and violent during the inter-war years and great flexibility seems preferable, at least until the shape of post-war trade can be seen. At present, the terrific distortion of production for Service requirements has not yet disappeared and many firms for a time will use existing yarn supplies to produce quasi-Service types for civilian use which will be non-competitive when the shortage of cloths becomes less acute. The rise and fall in popularity of important types in the course of a decade or so is common knowledge. The limbric, a best seller in the early 30's is to-day virtually extinct.

Very often new cloths must come from a different weaving district from the old. In these cases the vertical link breaks down. Overseas demand can be deeply influenced by extraneous factors, *e.g.*, a rise in the price of cocoa means a boom in West Africa, whose purchasing power is very elastic. A big contract with the Argentine Government may go to a foreign competitor—or even to another firm in this country; the result is the same. Even the best merchanting organisation can only cover a small portion of the total available market for cloth. Where stability is feasible it will usually be found to have well-established vertical units—*e.g.*, in the towel section and in certain coloured-woven types where the weaver-converter type is common. But where the productive capacity is versatile, *e.g.*, on plain cloths which can be varied

to suit many markets and can be bleached, dyed or printed, the weaver secures a more even and profitable off-take by a wider choice of converters.

On the whole it appears that Lancashire's present flexibility is one of its greatest assets. In the U.S. and most other countries, the scattered location of weaving and finishing plants at distances remote from the central market makes this flexibility impossible. Provided the manufacturing section is not chronically over-sized and has a sensible costing system which places long and short runs on a true economic footing there should not be undue pressure on the producer. The horrible pressure caused by the loss of the Indian market can never be repeated. Nor need we fear that the operative will fare ill in the future under any system. The pressure on wage levels of large families and half-educated juvenile labour² is a thing of the past. The violence of slumps and cyclical unemployment is likely to be subdued. The loss of foreign investments will make the health and welfare of our major export industries and those engaged in them a matter of real and constant concern.

A STUDENT OF MERCHANTING

The Pricing of Public Utility Undertakings

I

A controversy has developed as to the most desirable pricing policy of public utility undertakings.¹ The controversy arises, from a desire to find a policy which can be applied universally and from the natural discovery that any policy which has been put forward produces nonsensical results in some cases. The solution here offered is simply an attempt to provide a framework which can be applied in concrete cases and will give rise to different pricing policies in different circumstances. But first two question-begging terms must be considered.

The term public utility is one applied over the nineteenth century to those services, especially water, some forms of transport, gas and later electricity, in which it was seen that the normal regulating force of competition could not operate. It could not operate because legal or technical conditions imposed a local monopoly. Thus even if two rival water mains could be laid down in a street, there were serious objections to the double disturbance of the roads. In addition, so long as one water main could carry all the water required to the road, the first supplier would always be able to offer more favourable terms to consumers than a rival who was proposing to lay a second main. This is because laying of the main involves a large outlay compared with the marginal cost of supply additional water. The supplier who has made that outlay will reduce his price to marginal cost rather than allow a competitor to establish himself, while the new entrant

¹ H. Hotelling, "The General Welfare in relation to problems of Taxation and of Railway and Utility Rates," *Econometrica*, July 1938; J. E. Meade & J. M. Fleming, "Price and Output Policy of State Enterprise," *Economic Journal*, December 1944; A. P. Lerner, *The Economics of Control*; R. H. Coase, "Price and Output Policy of State Enterprise: A comment," *Economic Journal*, April 1945; T. Wilson, "Price and Output Policy of State Enterprise," *Economic Journal*, December 1945; R. H. Coase, "The Marginal Cost Controversy," *Economica*, August 1946 and subsequent controversy in *Economica*.

will only lay mains if he expects his receipts to cover both the marginal cost and a return on the capital expenditure involved. Only when the existing main is fully used, so that a new main must be laid whoever supplies the water, is competition possible. But then there is likely to be duplication involved at some other stage of distribution which will enable the existing supplier to underbid his rival. Competition would then work only through one firm expanding into the area of a neighbouring supplier or through the competition of suppliers trying to attract consumers to their area. But both forms of competition are too indirect and uncertain to be relied on, and, even at the height of *laissez-faire* opinion in this country, these industries were subjected to various measures of price regulation.

The reason then for regulation was that competition was impossible; and it was impossible because the average cost of production of each producer was falling. It is then convenient to use the term public utility to cover all cases where the market is too small to allow of more than one firm of optimum size. In all such cases competition is excluded and the same problems arise. This covers the traditional field of public utilities because they all involve large fixed equipment and are necessarily restricted to a local market. It may also cover additional cases. Imperfect competition presents very similar problems which are referred to in the final section.

The second preliminary difficulty is connected with the word "desirable." What is the criterion of desirability? It must be conceived in terms of the satisfaction of consumers' preference, since otherwise no criteria of policy are available.¹ Two criteria are needed, that of efficiency and that of distribution. The efficiency criterion is that the marginal rates of

¹ It is not maintained that consumers' preferences as expressed in the market are the sole criterion of social desirability. But if consumers' preferences are accepted as constituting a criterion then it is of importance to examine how they are best satisfied, although the principles arrived at will have to be modified by the preferences of individuals as expressed through the ballot box (or it may be, in some formulations, by some general social purposes known only by revelations vouchsafed to some leader). See A. P. Lerner, "Statistics and Dynamics in Socialist Economics." *Economic Journal*, June 1937. p. 256.

consumers' substitution between different goods shall be the same for all consumers (since otherwise they can gain by interchange among themselves) and shall be equal to the marginal rates of producers' substitution. When this condition is satisfied output of every commodity is said to be "ideal" relative to the distribution of income. This criterion can, in some cases, be satisfied by a number of different distributions of incomes as between persons.

When this is so, we need a further criterion to decide which distribution is to be preferred. This is an ethical or political choice which we must take as given by the preferences accepted in the community we are considering, and as interpreted, more or less imperfectly, by the political apparatus.

II

Consider first the simplest possible case. A bridge costs a certain sum to build and the cost is not thereafter affected by the number of times it is used. The marginal cost is nothing and the average cost simply represents the spreading of the fixed costs over a variable number of users.¹ There are then three problems to be solved :

- (i) if a bridge is built, what toll should it charge to users—what should be the price for its services ?
- (ii) what is the criterion for deciding when a bridge should be built ?
- (iii) If the answers to the first two questions involve a loss on the construction of the bridge, how should this loss be financed ?

The first question is easy enough. Any toll charged will prevent the bridge being used on some occasions. But the cost of using a bridge, once it is built, is nothing and the loss of those people who are prevented from crossing it, is a loss which is not compensated by a gain to anyone else. The best use of resources available is then obtained if everyone who wants to cross the bridge does so, and a toll prevents this.

¹ This is the case considered by Dupuit, *Annales des ponts et Chaussées*, 1844, in the first treatment of the problem.

We can express this by saying that ideal output is reached with zero price.

The second question is more complicated. If the decision to build the bridge is taken by a private firm and financed by a toll, then the bridge will be built, provided the most advantageous rate of toll just covers the cost. This means that the receipts must cover the value of the factors employed in producing it, which is equal to the value of their product elsewhere (providing that in the alternative industries competition is perfect). But consider the case of a bridge which, on this criterion, is just not worth while building. If it is not built there will be losses under two heads which the investor does not take into account. First, those consumers who are willing to pay the rate of toll which the firm would fix, include some who would be ready to pay more than that rate rather than dispense with the bridge. Thus if the bridge is built they receive a net gain above the toll they pay; if the bridge is not built that gain is lost. Secondly, there is the loss of the people who are unwilling to pay the toll which the private bridge-builder will fix. They will only benefit providing the bridge is built and no toll is charged. Thus the criterion of profitability is not adequate for deciding whether the bridge is a gain for the community as a whole.

Suppose however that the owner of the bridge were in a position to charge different prices for each user so that each user paid the maximum amount he would be willing to pay for the use of the bridge on each occasion. That is, we suppose perfect discrimination to be possible. Then, since the cost to the owner of allowing someone to cross the bridge is nothing, every potential user who is willing to pay anything at all will use the bridge; the use of the bridge will be optimum. But the users gain nothing from the bridge since each time they use it they pay for the full value of that use. All the advantage accrues to the owner and none to the consumers. If the owner finds that, with perfect discrimination, his receipts exceed expenses, then its construction is a net gain to the

community—no one is worse off and the owner is better off than if it were not built.¹

The criterion, therefore, for deciding whether the bridge should be built is whether it would meet its costs if it could charge on the basis of perfect discrimination.

These points can be made in terms of the Marshallian theory of consumers' surplus. In figure 1 (see Appendix), DD' is the demand curve, and AP the rate of toll which will maximise the bridge owner's receipts (the rectangle $OAPB$). The bridge will be built by a private *entrepreneur* providing these receipts exceed the annual cost of the bridge, but not otherwise. If it is built and a toll of AP charged, the consumers' surplus is represented by the area BDP .² The fact that a toll is charged means that all consumers for whom the use of the bridge is worth less than AP , lose a consumers' surplus represented by APD' although, *ex hypothesi*, no expenditure would be required to satisfy them. The discriminating monopolist would then have receipts

¹ This involves neglecting the producers' surplus accruing to the factors employed (see J. M. Fleming, "Price and Output Policy of State Enterprise," *Economic Journal*, December 1945, who considers that the producers' surplus may well be more important than the consumers' surplus). This can be covered by supposing that the bridge-builder can also discriminate perfectly in his purchases, so that both surpluses accrue to the bridge owners. In this article, however, the problems connected with producers' surplus have been neglected. This can be justified on the ground that they are of considerable complexity and that it is proposed to examine them in detail elsewhere. Thus it is assumed that the factors of production are in perfectly elastic supply to any given public utility. Where this is not justified it is easy, once we know what the producers' surplus is, to adjust the wording to allow for it. The difficulty is to know what it is. The recognition of producers' surplus as a relevant factor covers the point emphasised by Mr. Lerner (*The Economics of Control*), that, where the supply of factors to a firm is imperfect, marginal cost to the firm is higher than marginal cost to the community. The difference is the marginal producers' surplus.

² This consumers' surplus is a sum of money and not (as Marshall sometimes implies) a quantum of utility. For present purposes the relevant consumers' surplus is that loss of income which exactly offsets the gain to consumers from the existence of a bridge charging a toll of AP . This is not exactly measured by the area under the demand curve, but in most cases the difference is of secondary importance (see J. R. Hicks, "The Four Consumers' Surpluses," *Review of Economic Studies*, Winter 1943). The importance of the discussion of the complexities of the consumers' surplus is not that it proves Marshall wrong, but, on the contrary, that it shows how nearly right he was and how simply the adjustments can be made whenever it may be found necessary.

represented by the whole area ODD' and every consumer to whom the bridge was worth anything would use it.

If the demand curve is a straight line, then if a private *entrepreneur* builds the bridge only half the potential users of the bridge will in fact use it and it will be built only if the total potential gain is twice the cost of the bridge.¹ This is some measure of the inefficiency of a system of providing public utilities on the basis of the revenue which can be obtained from them.

It now appears that for two reasons the bridge will fail to finance itself if the optimum supply of its service is to be obtained. Firstly, any toll will cause a maldistribution of resources and secondly bridges should be built which, on any practicable method of fixing tolls, would not be able to pay for themselves. The third question then arises as to how this loss is to be met.

The obvious answer appears to be that it should be borne out of the general Exchequer Funds—that is by taxpayers as an addition to the taxes which they are already paying. This is the solution maintained by Professor Hotelling² and Mr. Lerner,³ but it is not wholly satisfactory. It neglects the fact that taxation is not a painless process and also that the beneficiaries from the bridge may be different from the people who have to pay the extra taxation.

Professor Hotelling relies on the fact that there will always be taxes which involve no cost to society. But in fact, though there may be some taxes which it would be desirable to impose even though there were no need for revenue (alcoholic drinks or possibly taxes on the very rich) all these taxes will already have been imposed. Nor are there available any neutral taxes in any modern state. If further outlays have to be met from the Exchequer, the additional taxes will themselves cause a maldistribution of resources. Professor Hotelling recognises this with respect to income tax, which causes a

¹ Since if DD' is a straight line, $OA = AD'$ and $BPD = APD' = \frac{1}{2} OBPA$ (fig. 1),

² *op. cit.*

³ *op. cit.*

diversion from paid to unpaid activity (from work to leisure and also from earning to working for oneself), from risky to safe investment and from improving efficiency to avoiding taxation. He, therefore, argues that the deficit should be met from taxes on land rents.¹ But if the taxation of rents at a higher rate than other incomes is legitimate (and most of us probably feel that it is not) then they should be taxed 100 per cent. whether or not public utilities are to be financed out of general taxation.² Thus once again the additional expenditure incurred must be met from the normal sources of revenue : principally income taxes or indirect taxation.

Mr. Lerner is less explicit, but he seems to visualise the state distributing a social dividend which would be independent of other income.³ Then if losses on public utilities had to be met this dividend could be appropriately reduced without causing a maldistribution of resources.⁴ However a positive social dividend (except in a fully collectivised society where all income from property went to the state) is hardly conceivable unless state expenditure is financed from other taxes. Mr. Lerner considers the possibility of a negative social dividend—that is a poll tax. This would indeed be a solution ; a poll tax, is from one point of view, the ideal tax, since it causes no maldistribution of resources. Unfortunately it is the most regressive tax, so that as a practical solution to the problem of obtaining revenue it is only available in very exceptional societies.

¹ H. Hotelling. *op. cit.* pp. 256-7, also his "Prices and Marginal Costs in an Optimum System," *Econometrica*, April 1939 : pp. 154-5.

² Providing that the revenue is required by the Exchequer. In fact income from rents is far below the tax requirements of public authorities in nearly all countries, and only a small proportion of these rents are payments for the indestructible powers of the soil.

³ *Economics of Control.* p. 259.

⁴ A change in the social dividend would affect the supply of labour, but it would not, as a change in the rate of income tax would, alter the rate at which income can be substituted for leisure. There is no economic criterion for deciding whether the supply of labour forthcoming with a social dividend of £1 a week is more desirable than that forthcoming with a social dividend of 5/-. But presumably there is some social criterion for deciding between them and if the finance of deficits from public utilities involves reducing the social dividend below the optimum, then a loss is incurred, even though no economic measure can be found for it.

The position then remains that a full solution of the pricing policy of public utilities must consider both the advantage from operating them under conditions which must give rise to losses and at the same time the taxes which will have to be imposed to meet this loss. A bridge might produce a small net gain over its cost but if the collection of the additional taxation required to finance it involved a greater loss of consumers' surplus then it should not be built. The two sides to the problem must be treated together.

The other objection to making use of general taxation is that those who pay the taxes may not reap the benefit. To this, the answer, which runs through all economic reasoning since Adam Smith, is that if every change is made which benefits some more than it harms others,¹ then in the end everyone will benefit more than he loses.² This is likely to be so, providing that the changes are numerous and the benefits and losses distributed at random among the population. But it need not be so. If we took bridges alone, then there would be a presumption that people living near rivers would be likely to gain more than the average. If we took the whole range of public utilities it might well seem that all would gain. But Mr. Coase has shown³ that there is a presumption that the inhabitants of small towns would be more likely to gain than either city dwellers or countrymen. And in fact in most countries we find complaints that state help in this field has benefitted some areas or some classes at the expense of extra taxation borne by the whole community. Such charges are almost incapable of disproof and, whether they are justified or not, there is some objection to a policy which is almost certain to provoke them. There is, therefore, a presumption in favour of some form of financing which ensures that the people who gain from the bridge pay the whole cost as against making the deficit a charge on the national exchequer.

¹ The comparison must be in terms of the money value of the gains and losses, since this is the only measure which admits comparison of one man's gain with another's loss. The merit of consumers' surplus analysis is that it shows that the comparison is always conceivable.

² Hotelling, "The General Welfare" and Hicks, "Rehabilitation of Consumers' Surplus," *Review of Economic Studies*, February 1941. p. 111.

³ "The Marginal Cost Controversy," pp. 177-8.

When a bridge is built, for which no toll is charged, for each user there is some reduction of his income which would leave him just as well off as before. This is his consumers' surplus.¹ The criterion as to whether the bridge should be built is whether the sum of all the consumers' surpluses which it produces exceeds the cost of the bridge. If then a method can be devised for charging a fixed annual sum to each user, adjusted so that no one has to pay more than his consumers' surplus, this will be the ideal method of charging.² As the sum is fixed it cannot be avoided by any change in consumption or the supply of factors, so it does not produce any maldistribution of resources. It does not cause any redistribution of income between taxpayers and bridge-users. Finally, and probably most important, it provides a check on the amount of investment.

This a matter of the greatest difficulty. We can supply a formal criterion of the cases when a bridge should be built : when it would pay with perfect discrimination or, which is the same thing, when the consumers' surplus exceeds the cost. But how can we discover whether this condition is met in any particular case? Professor Hotelling considers that this is "not a historical but a mathematical and economic problem."³ But it is not as simple as this. How do we proceed to discover the consumers' surplus obtained from the service of a bridge? If there has been a ferry it will be greater than the gross revenue from the ferry, but how can we attempt to guess how much greater? The only solution possible (and that is only possible in some cases) is to assess each user for a lump sum specifically attributable to the bridge and to allow them to refuse to pay—at the cost of never using the bridge—if the charge seems too high. The only person who can attempt to make an estimate

¹ Strictly, the price-compensating variation.

² Subject to the exception that it may be desired to redistribute income in favour of the users of this bridge. Thus subsidising public utilities in depressed or isolated areas might properly be used as a means of equalising incomes in different parts of a country.

³ "The General Welfare," p. 269.

of his consumer's surplus is the consumer himself.¹ Unless there exists some check which enables the consumer to compare the cost with the advantage, there is the serious risk of guesses being made which are wholly unrelated to the facts and which are never revealed as such. Once it is admitted that investments which are unprofitable may be justified, and that no practicable calculation will show whether they are or not, the way is open for any investment which is favoured by any public authority. In most cases it will be found that no complete check is possible, but some methods of financing are better than others at providing a partial check.

It is worth describing a case which occurs occasionally in practice and does achieve the ideal pricing system. Suppose a bridge to be contemplated by a small group of farmers who will have to bear the whole cost. Each will make up his mind as to what it would be worth paying to prevent the scheme falling through, that is, he estimates his consumers' surplus. If the cost is less than the aggregate consumers' surplus it will be built, if not, not. The farmers will meet and bargain, so that if the gain is considerable, the division of the costs will depend largely on ability at bluffing, while if the gain is small the costs will be distributed nearly in proportion to each farmer's consumers' surplus from the bridge. In this way a bridge may be built which no practicable system of tolls would finance and no user is prevented from using it because of a toll. But such a method is only practicable where the community is small. Where it is large, the individual contribution cannot be fixed by negotiation but must be determined by some authority on the basis of objective criteria. Even then, provided that the consumer knows how much he is paying for each form of public utility, some check is possible, since the consumer can protest through the ballot box if he thinks there is too much

¹ As Mr. Coase puts it: "If it is to be discovered whether consumers are willing to pay an amount equal to total cost, this can be done, under a pricing system, only by asking them to pay this amount."
 "The Marginal Cost Controversy: Some Further Comments,"
Economica, May 1947. p. 151.

or too little investment.¹ But if he does not know he cannot protest.

III

It is simplest to judge various pricing policies by considering the ideal as charging a price equal to marginal cost (in the case of the bridge this is nothing). This will cause a loss which must be met by a tax, which may take various forms—income tax, local rates, a toll on users, or the sale of season tickets. Some of these “taxes” are ones that can only be levied by a taxing authority, while others can be levied by private *entrepreneurs*. The principle, however, is the same. Some tax must be imposed and the problem is to find the best. Naturally there will not be *one* answer; the best tax will be different according to the detailed nature of any particular case.

First we must lay down the criteria for deciding which taxes are good:

(1) ideal output from a given investment. A tax is good if it ensures that once investment has taken place it is used by all who are willing to pay the marginal cost.

(2) ideal investment. A tax is good if it ensures that a bridge which cannot be made to pay with any rate of toll can still be built. It is also good to the extent that it ensures that bridges are not built where the cost exceeds the consumers' surplus. There is the double problem; the financing system must neither be too niggardly nor must it be too spendthrift.

(3) distribution of the burden. A good tax is one which places the burden where political preferences wish it to be put. If the distribution of incomes was ideal before the bridge was built this involves putting it on the users of the bridge.

(4) autonomous financing. Most recent discussions of this problem have ignored the influence of the method of financing on the organisation of the industry.² It is clear that

¹ It will be noted that this is the theory of neutral finance (see di Viti di Marco, “First Principles of Public Finance”). It must, however, be supplemented by the redistribution theory, which is based not on economic reasoning but on generally accepted social aims. Despite their different origin, the two theories can be combined.

² A notable exception is Mr. Wilson.

if public authorities are to bear the losses they will have to control the operation of the enterprise. In a world where the future cannot be fully foreseen the loss to be made good will vary from year to year and depend on the efficiency of the managers. So whoever has to bear the loss must nominate and check the managers. This means not only nationalisation but nationalisation with political control of detailed operations. It is usually held that a private enterprise will have more incentives to efficiency than a state owned enterprise (though this may be more than offset by the fact that the state enterprise can aim to forward the interests of consumers, whereas a private firm will only do so under special conditions which are never present in the public utility field). Further, it is usually held that a public enterprise is likely to be more efficient, the greater the degree of autonomy it enjoys. But it can only enjoy autonomy if its financing is autonomous. Thus a pricing system that enables the enterprise to meet the loss involved by marginal cost pricing directly and without recourse to political authorities is, to that extent, preferable to one that does not. How important this consideration is depends on an estimate of the administrative advantage of autonomy.¹

It will be noted that the question of the incentives to efficiency of operation of the enterprise, as opposed to the efficiency of investment decisions has not been included as a criterion. Short of allowing full monopolistic exploitation (which is nowhere allowed) all systems of pricing of public utilities abandon the automatic incentive to efficiency which is supplied by the profit motive. How well any system will work depends then on detailed administrative methods of control and appointment. In general all that one can say is that autonomy of decisions makes efficiency possible, while the division of responsibility for decisions makes it very difficult.

¹ The L.N.E.R. has proposed a system by which a large part of the fixed costs of the railways would be financed by the State, thus making marginal cost pricing possible, but the operation of the railways would remain in the hands of the railway companies. It would, however, be impossible for the Exchequer to agree to a system which might enable large dividends to be paid without strict control over the operation and dividends of the railway companies. Further a division of control between operation and permanent investment is impracticable.

Applying the four criteria of a good tax we can consider the following methods of financing the deficit :

(a) subsidy from national funds ; this is equivalent to an increase of national taxation, of which we need only consider an increase of income tax or of indirect taxes on consumption.¹

(b) the two-part tariff ; this is a tax on real property as a condition of supply by the public utility.

(c) subsidy from local funds ; in the United Kingdom this is equivalent to a tax on real property.

(d) average cost pricing ; this is equivalent to marginal cost pricing plus a tax on the consumption of the service of the public utility (levied directly by the public utility).

(e) discriminating pricing ; this is equivalent to marginal cost pricing plus a tax on consumption at different rates for different classes of consumers.

All these methods of financing can be considered simply as different methods of raising the taxation necessary to cover the deficit resulting from the ideal method of pricing the services of the bridge. The advantages of these methods are discussed in detail, with reference to a wider range of public utilities than the bridge which has been used as an example. This involves anticipating some of the arguments of the following section and ignoring some of the complications which arise with other public utility pricing. It will be seen that each of these methods of taxation may be justified in particular cases and that there can be no *a priori* judgment that any one is always right.

(A) *National Funds.* The advantage of this solution is that it makes pricing at marginal cost possible and that it enables investment to be undertaken which would not be possible if any of the last three methods were used. Where the advantage is local (as it is with so many public utilities) it has no advantage not shared with the use of local rates, but where the advantage is spread over a wider range it is the only method which can prevent the supply from the public utility being

¹ An increase of the burden on the national exchequer should lead to an increase of all taxes already imposed, and possibly the addition of new ones. These are the main sources of revenue in most countries and can be taken as those which will be raised to meet additional outgoings.

curtailed below what it should be. Railways, trunk roads or (for the principle is the same) the defence services must be directed for the country as a whole and, therefore, financed on a national basis. This advantage has seemed conclusive to Professor Hotelling. But, as Mr. Coase has pointed out, it suffers from major disadvantages. It does not prevent the investment in public utilities from being expanded to the ideal level, but it does nothing to prevent it from being expanded beyond that level. It is liable to tax some for the benefit of others and it ensures the loss of financial autonomy.

If national finances relied on a poll tax, this would be the main objection. But in fact we must consider other taxes. An income tax, as already stated, leads to a maldistribution of resources and there is no reason why that maldistribution should not be as important as the gain from marginal cost pricing in a particular public utility. If the tax is an indirect tax on consumption, it means that marginal cost pricing is obtained in one industry at the cost of a departure from marginal cost pricing in some other direction.¹ There should be some gain, because the indirect tax could be placed on the product of the public utility (in which case we revert to average

¹ It used to be held that all forms of indirect taxation (except those specifically required to equalise private and social net product) were always undesirable, and that all taxes should be on income or capital. If this were true we could ignore indirect taxation in a discussion of an ideal pricing system. But experience of very high marginal rates of income tax has caused a change of opinion in this country. It is now widely held that there is some theoretical reason for believing that indirect taxation has a smaller effect on the supply of the factors of production than income taxes. This is a mistake. The main advantage of a switch from direct to indirect taxation is that it can be used to reduce the degree of progression of the tax system. But the same change in the rate of progression can be obtained by altering the income tax formula and will have the same effect on the supply of the factors. However, there are important reasons for preferring some use of indirect taxation. Politically, the use of indirect taxation is an easier way of reducing the degree of progression; administratively, it may well be cheaper, and indirect taxation is less subject to certain kinds of evasion which arise with high marginal rates of tax. Finally, it is often maintained that the psychological reaction (and hence the effect on the supply of the factors) is different if the same progression is obtained by direct or indirect taxation. It is for these reasons (reinforced by the fact that all countries in fact make use of indirect taxation) that we must consider the possibility that, if public utilities are financed from general funds, this will mean an increase of indirect taxation.

cost pricing) ; if it is not it is because some other indirect tax is thought to produce a smaller loss of consumers' surplus. But the gain may well be less than the loss of financial autonomy and of a check on over-investment.

To argue, therefore, that the use of general taxation must be the right answer in all cases of public utilities is wrong. It is equally wrong to maintain that it can never be. In the case of the use of roads and bridges by pedestrians, any other form of finance would be intolerably inconvenient. For railways the only alternatives are average cost or discriminating pricing, and a subsidy from state funds may well be justified. Most important of all, the general services of the state (for example, the defence services) are public utility services whose beneficiaries are the citizens of the country. The only method of financing them is through general taxation arranged so that the taxpayer pays no more than the consumers' surplus which he derives from them.

(B) *Two-part tariff.* The principle of this method is that the consumer pays a fixed sum per year if he wishes to consume the product of the public utility at all and in addition he pays the marginal cost for each unit supplied. If the fixed sum were fixed separately for each consumer, so that no consumer was asked to pay more than the surplus he would derive from consumption, this method would be ideal. It would indeed be identical with the case of the farmers who have to decide whether to build a bridge: In fact, individual assessment is impossible and the fixed charge has to be related to some objective criterion. This means that it can be viewed as a tax on something other than the consumption of the services of the public utility. The usual method is to base the charge on the rateable value of premises.

This provides a check on excessive investment, since as investment increases the fixed charge has to be raised, and consumers have the opportunity of withdrawing. It does not indeed ensure that investment shall not exceed the ideal but it does ensure that it shall not exceed the ideal by so much as

to exceed the consumers' surplus.¹ Further this method preserves autonomous financing by the public utility and ensures that the cost is borne by the beneficiaries. Finally it enables those who do decide to incur the fixed charge to consume the ideal quantity of the service supplied.

These reasons convince Mr. Coase that this is *the* right method of financing. There are, however, objections both theoretical and practical. It is true that the method allows those who are willing to pay the fixed charge to consume the ideal amount, but it also excludes completely those who consider the charge too high. The method is, therefore, only efficient for services where there exists some criterion which enables the charge to be related closely to individual surpluses. Whatever basis is used implies a tax on some form of outlay and, therefore, a corresponding diversion of resources. If the fixed charge is based on rateable value it is equivalent, for consumers, to an increase of rates and constitutes a discouragement to the construction of houses of high rateable value.

The value of this system in any given case depends wholly on the basis on which the fixed charge can be assessed; it depends on the tax it involves. For electricity it works well because the discouraging effect of the tax is small² and because the tax corresponds fairly well to the surplus derived from the use of electricity at marginal cost, but even so it must exclude some consumers who would be willing to buy electricity at marginal cost. For gas this system of charging is restricted because of objections of this kind. For railways individuals

¹ Suppose there to be three sizes of bridges available for which the annual cost and annual consumers' surplus are as follows:

Size of bridge	Cost	Consumers' surplus
A	£100	£200
B	£200	£250
C	£300	£280

Then if consumers have to pay a fixed charge covering the cost of the bridge, bridge C will be eliminated, whereas it might well be built by a public authority financed out of general taxation. But bridge B will not be eliminated, although bridge A is the ideal (because an extra £100 spent only raises the consumers' surplus by £50).

² In Manchester the fixed charge is equivalent to a rate of 2/6d. in the pound.

differ widely in the use they make of service supplied and no basis for assessing the fixed charge can be found. In the limited sphere where the two-part tariff is easily applied, a strong case can be made for it, but it must not be forgotten that this sphere is very limited.¹

(C) *Local Rates.* A subsidy from local funds financed by rates appears to be quite different from the two-part tariff. But, except for the fact that it involves a loss of financial autonomy, it is exactly equivalent to the use of a two-part tariff in the case of any service which all ratepayers will consume. This is the case for the supply of water. The difference then arises solely from the loss of financial autonomy and the loss of the right to contract out if the fixed charge (or the appropriate element in the general rate) exceeds the consumers' surplus. The latter is an advantage where contracting out would involve costs to other people (for example, the refuse disposal) and is inevitable when consumers cannot be identified (the use of local roads or buses). Thus, this again is the proper method of financing for some kinds of public utility.

(D) *Average Cost Pricing.* This can be viewed as marginal cost pricing combined with an indirect tax on the service supplied. Once it is admitted that the loss arising from marginal cost pricing may be financed by indirect taxes, we cannot exclude the possibility that the best tax may prove to be one on the particular public utility which gives rise to it. Were it not for other factors this could be treated as a possible case, but one which could only occur rarely and by accident.

The method has the obvious disadvantages that it reduces the exploitation of existing investment below the ideal and reduces the amount of investment undertaken below the ideal. On the other hand it ensures financial autonomy and ensures that there is no redistribution of income from one section of the community to another. Finally it ensures, as none of the

¹ The case is strengthened because the two-part tariff is easy to apply where the requirement of a fixed installation for each customer makes it possible to identify customers. Where this is the case part of the costs are dependent on the number of consumers and not on the amount supplied. A fixed charge per customer to cover marginal consumer cost is, therefore, required as a component of marginal cost pricing.

previous methods do, that investment is not excessive. Thus where financial autonomy is important, where the disadvantages of excessive investment are greater than of insufficient investment and where no suitable basis is available for a two-part tariff, the best available method of financing may well be to allow the enterprise to charge a price equal to its average costs.

(E) *Price discrimination.* This is a variant of the previous method, whereby the tax to finance the loss involved in marginal cost pricing is imposed on the consumers but at different rates for different classes of consumers. Where discrimination is practicable, differential rates can always be found which will increase output and investment above the level reached by single-pricing but which can never exceed (or, as perfect discrimination is never practicable, can never reach) ideal.¹ It is, therefore, preferable to a single price policy whenever it is practicable. In practice the scope for discrimination may be limited by the fact that maximising output might involve discriminating against classes of consumers whom it is desired, on social grounds, to favour. Discrimination by the railways has been handicapped in this way.

The standard examples of discrimination are railway rates and (as an alternative to the two-part tariff) electricity charges. Before the development of road transport railway rates were not unsatisfactory. The only alternative would have been finance through general taxation, and it is reasonable to believe that the nationalisation, which this would have involved, would have rendered railway development much less active—that it would have reduced rather than increased investment. In the climate of opinion of the nineteenth century, there was indeed no alternative and it may well be that the deviation from ideal output was negligible as compared with those caused by other factors. The complication has arisen from the competition of road haulage where pricing is on a wholly different system, and charges are much closer to marginal costs (despite the taxation of road hauliers). The result has been that while the underdevelopment of transport as a whole may not have been serious,

¹ See J. V. Robinson, "Economics of Imperfect Competition," Chap. 15.

the maldistribution of resources between road and rail did become serious. This had led to a system of controls by licensing road hauliers, and attempts to force up road transport rates. The latest attempt to find a solution, since these methods are likely to be insufficient, is the proposal to nationalise all transport both by road and rail. It is clear that the restrictive policy of the Road Traffic Act was highly inefficient, and it is likely that the Transport Commission, as long as it is bound to cover its costs both for rail and road separately, will be no less so. The inefficiency arises from attempts to force traffic to go by rail when the marginal cost is lower than for road transport, although the pricing system is such that the road charge is the lower. The system of financing is at fault and some modification involving finance of the railway losses either through general taxation or taxation on all forms of transport is necessary.¹ This illustrates the contention that there is no unique right method of finance for public utilities. The appropriate method depends on the detailed conditions of each case, and these may change from time to time.

IV

The argument has so far developed in terms of a public utility for which the marginal cost is zero. There are several cases of public utilities of which this is true, broadcasting being the most striking example.² But for most public utilities the marginal cost will be positive. Then, if in all other industries, price is equal to marginal cost, ideal output will be obtained if

¹ The reason why the maldistribution of resources becomes more serious when average cost pricing is applied to close substitutes is that the maldistribution between any two industries is greater (for any given disparity between the ratio of the price to marginal cost in the two industries), the greater the elasticity of consumers' substitution for their products. In the extreme case where the elasticity of substitution is zero, no maldistribution occurs. A similar case is that of the competition of gas and electricity. Gas is largely supplied at average cost and electricity by a two-part tariff or discriminating rates and there is, therefore, a tendency to eliminate gas even though the marginal cost may be lower than that of electricity.

² Another example is the exploitation of inventions considered by Professor Polanyi in "Patent Reform," *Review of Economic Studies*, Summer 1944.

price is equal to marginal cost. But if average cost is falling, fixing price equal to marginal cost involves a loss. This loss must be financed by some tax, with the alternatives discussed in the last section.

Certain complications, however, arise. Where, in other industries, competition is not perfect and hence prices exceed marginal cost, pricing of one product at marginal cost will produce an output in excess of the ideal.¹ The ideal distribution of resources between industries will be obtained if the ratio of prices to marginal cost is the same in all industries. But if prices are above marginal cost the supply of factors of production will not be ideal.² This suggests that, if we are concerned with price fixing for a particular public utility and must take as given the fact that for all other products price equals marginal cost multiplied by some factor a (> 1), then ideal output will be achieved if in this public utility price is fixed between marginal cost and $a \times$ marginal cost. Where the ideal price will lie in this range depends on the effect of this price on the supply of the factors, and on their distribution. A similar problem arises when one industry provides a close substitute for the product of one where the ratio of price to marginal cost is very different from that in the mass of industries. Thus, if prices are twice marginal costs on the railways, and equal to marginal costs in all other industries, then to reduce road charges to marginal costs would involve expanding the resources available to the transport industry towards the ideal, at the cost of reducing the output of the railways further below the ideal. An intermediate price would then be appropriate.

The second complication concerns the control of investment policy. It has been maintained that if prices are fixed equal (or proportional) to marginal cost there is an automatic criterion

¹ See A. F. Kahn "Notes on Ideal Output," *Economic Journal*, January 1935 : and J. R. Hicks, "The Rehabilitation of Consumers' Surplus," *Review of Economic Studies*, February 1941. pp. 114-5.

² See Lerner, "The Economics of Control," pp. 102-4.

as to the amount of investment which should be undertaken.¹ This is only true if we are concerned with the amount of investment undertaken by an enterprise which already exists, and if the amount of investment can be treated as a continuous variable (that is, if there are no significant indivisibilities of plant). In this case, long period average and marginal cost curves can be drawn up, and ideal output is obtained when price is equal to both short and long period marginal cost.² The former ensures that ideal output is obtained from given capital equipment, the latter that the ideal amount of capital equipment is available. But this criterion does not help to decide whether or not the enterprise should be established at all. For this exactly the same problem is involved as with the bridge; it is necessary to compare the consumers' surplus with the loss involved in marginal cost pricing. The problem is to this extent easier: if there is some scale at which an enterprise can meet its costs by any method of charging, then there must be a gain from establishing it. That gain will be maximised if price is equal to long and short period marginal cost.³ If investment is only possible in discontinuous lumps a long period marginal cost curve cannot be drawn up. The problem of estimating consumers' surplus arises again, but in a less intractable form, so that if the lumps are small relative to the size of the enterprise a moderately accurate criterion of

¹ See J. A. Nordin, "The Marginal Cost Controversy, A Reply," *Economica*, May 1947. p. 143.

² See J. Viner, "Cost Curves and Supply Curves," *Zeitschrift für National-ökonomie*, September 1931 and Lerner, "Statics and Dynamics in Socialist Economics," *Economic Journal*, June 1937.

³ Professor Nordin (*loc. cit.*) is wrong in maintaining the contrary. He overlooks (in his chart III) that, if there are two products *A* and *B*, the production of a negligible amount of *B* may involve the use of resources which could have produced a concrete quantity of *A*. The transformation curve might be *ACDB* in figure 2 (See Appendix). Both should be produced if the indifference curve tangential to *CD* cuts *Oy* above *A* and *Ox* beyond *B*. It is not possible to discover whether this is so by fixing prices proportional to marginal cost.

investment policy is possible.¹ The problem of investment is, therefore, only to a minor extent the problem of the amount of investment by existing enterprise; it is rather the problem of when an enterprise should be established.

The major complication of public utility pricing arises from the fact that costs do not depend uniquely on output. They depend also on the number of consumers and the time and place of supply. The principle involved in marginal cost charging is simple, though its application may not be. Each consumer must pay the total costs of the enterprise if he does consume its products, less the costs the enterprise would incur if he did not consume at all. In many cases this will involve multi-part pricing to ensure that this principle is applied to the consumer's consumption in the aggregate and also to each component of that consumption. Thus the telephone subscriber must pay the installation cost, a rent for his telephone, and a charge for each call dependent on the distance. Multi-part pricing which arises from this factor may (but need not) be combined with the two-part tariff discussed in the last section as a method of financing the loss incurred by marginal cost pricing. In the sense relevant here, multi-part pricing is a component of a system of charging marginal cost.

Finally a complication arises from the fact that marginal costs may fluctuate widely over short periods. If the ten o'clock train to Liverpool has vacant seats one Monday morning, the marginal cost of carrying an extra passenger may be negligible. On Tuesday, however, there may be a rush and a "special" be required, so that the marginal cost is high. But

¹ Suppose, in figure 3 (See Appendix), DD' is the demand curve, MC_1 the existing marginal cost curve, and MC_2 the marginal cost curve if an additional investment costing $\pounds A$ is carried out. Then the consumers' gain from this investment if price is reduced from CG to FH is $BCED$ in respect of the gain to consumers who would have bought at the higher price, plus CEF for the units which are only sold owing to the reduction of price. The investment should be undertaken if the gain $BCFD$ is greater than $\pounds A$ and not otherwise. $BCED$ can be estimated before the investment is carried out with as much accuracy as any other forecast of the results of investment. CEF can only be estimated by making assumptions as to the shape of the demand curve. But the smaller the indivisible lumps, the smaller CEF relative to the total gain.

such variation in charges would be inconvenient to the extreme.¹ If it is decided that, to enable consumers to plan in advance, the same charge must be made on both Monday and Tuesday and that the rate shall only be changed once a year, what then is the marginal cost? The only solution is to average the marginal cost over the range for which uniform prices are decided.² This solution is a compromise between exact equality of marginal cost and price and the gains of convenience both to consumers and the enterprise from some degree of stability. Since it involves charging more than marginal cost to some consumers and less to others³ it produces some maldistribution of resources which can be reduced only by increasing the number and flexibility of different rates.

V

Finally reference must be made to the application of this analysis to an imperfect market. In an imperfect market price exceeds marginal cost for each firm. Therefore firms are not producing their ideal output.

Suppose that all firms are compelled to equate price to marginal cost. Then each firm must try to expand output. But all firms cannot do so simultaneously. If all firms are affected equally they will all be producing the same output as before and their marginal costs will have risen to equal price. But the profits of each firm will be reduced and some will go

¹ Mr. Lerner points out: "price changes should not be made more rapidly than the adjustments to them are made by the producers or consumers who determine how much will be bought or sold," "The Economics of Control," p. 216.

² Thus, if the fare must be 20/- or 20/6d. (or some multiple of sixpence) and the number of passengers will be P_1 or P_2 respectively and the total cost of the railway C_1 if the lower price and C_2 if the higher price is fixed, then we can define this "averaged" marginal cost as $\frac{C_1 - C_2}{P_1 - P_2}$ then if this is greater than 20/3d. the fare should be 20/6d. or higher; if it is less than 20/3d. the fare should be 20/- or lower.

³ See R. H. Coase, "The Economics of Uniform Pricing Systems," *Manchester School*, May 1947.

out of business.¹ Therefore resources are set free, which enables the remaining firms to expand, and at the same time raises the demand curve for all firms still in business. This reduction of the number of firms will continue until such time as the demand curve is sufficiently raised, and the cost curves sufficiently lowered for the demand curve to cut the average cost curve at its intersection with the marginal cost curve.²

If we treat consumers' preferences as wholly irrational,³ this method of regulating imperfect markets is satisfactory and is superior to Mr. Kahn's method of making all markets equally imperfect. It is superior because it ensures the optimum supply of the factors in addition to their optimum distribution between industries.

It is, however, unrealistic to consider all, or even most, consumer preferences as irrational.⁴ But if we do not make this assumption, the enforcement of marginal cost pricing involves the elimination of firms and with it a loss of consumers' surplus. As Mr. Kahn has shown, the gain from the elimination of a firm may, or may not, exceed the loss of surplus from the reduced choice available to the consumer. No practicable test is available to discover whether a particular source of supply should be eliminated or not. This is so because the consumers' surplus derived from the existence of

¹ This can be illustrated by a diagram. (See Appendix, figure 4). Let AC_1 and MC_1 be the average and marginal cost curves when firms are maximising profits, and DD' and MR be the demand and marginal revenue curves. The competition for factors resulting from the attempt to expand output from OA to OB leads to a rise in the marginal cost curve until it passes through P . This must also raise the average cost curve which therefore no longer passes through P .

² See R. F. Kahn, *op. cit.* p. 24.

³ Such a position is reached only if there is an optimum size for every type of industry. Mr. Norris obviously assumes that there is not for retail trading ("State Enterprise Price and Output Policy," *Economica*, February 1947, pp. 57-8). If in any type of business the optimum size turns out to be so large that one optimum firm would be too large for its market it has to be treated as a public utility (sections II and III). There is the related problem that in many firms it is impossible to discover marginal costs with any degree of accuracy. Even so, marginal costs can be used as a criterion of policy, to the extent that they can be estimated.

⁴ See J. R. Hicks, "The Rehabilitation of Consumers' Surplus," p. 116.

firm *A* depends on whether firms *B* and *C* continue to exist. Thus even if we know the complete preference scales of every individual the condition as to which firms should remain could only be expressed in an insoluble system of inequalities.¹

We revert, therefore, to the problem of section III. There is a justification for maintaining some sources of supply which would fail to cover their costs with marginal cost pricing, and if they are maintained their ideal output will be achieved with marginal cost pricing. The cost must be borne in some way and, since the two-part tariff is not available,² the alternatives open are nationalising and finance through state funds, or average cost pricing. But the government, if it bears the loss and has no criterion of the firms it should retain, must feel a strong incentive to the concentration of production in the interest of efficiency and the elimination of losses. The alternatives seem to be between the operation of Mr. Lerner's rule, with the reduction of the scale of consumers' choice, and the retention of the present system of average cost pricing in imperfect markets. The latter system maintains consumers' choice (and will indeed probably provide more than the ideal

¹ Professor Meade has raised a similar problem, "suppose that industries *X* and *Y* produce close substitutes (gas and electricity) and that each involves the employment of an individual factor. Should the community produce (a) no gas and no electricity, (b) some gas but no electricity, (c) some electricity but no gas, or (d) some electricity and some gas" ("Mr. Lerner on 'The Economics of Control,'" *Economic Journal*, April 1945. p. 60). With only two industries, the solution is simple, providing we assume some measure of the consumers' surplus derived from a single commodity. For then, if one of the two products shows an excess of consumers' surplus over loss in operation (assuming the other is not supplied), the product which gives the larger net gain should be supplied. Once it is supplied, it is possible, *ex hypothesi*, to decide whether the other also provides a net gain. But with three this is no longer true. Suppose them to be gas, electricity and district heating, we can know the consumers' surplus for each on the assumption that the others are not supplied. But it does not follow that the one which gives the largest net gain should be supplied. So we must then take the surplus from each pair, assuming the third not to be supplied. If there are n products, we need to consider the consumers' surplus from $2n - 1$ products or combinations of products. That combination should be supplied which gives the largest net gain. This can only be done by knowing all transformation and all indifference curves. As a criterion of policy this can be ruled out.

² See W. A. Lewis, "The Two-Part Tariff," *Economica*, August 1941 pp. 262-3.

variety of choice) at the cost of productive inefficiency and a distorted supply of the factors.

The choice between these methods is, therefore, not dictated by the logic of economic reasoning. It can only be based on a personal estimate of the relative importance of maintaining variety of choice, or of eliminating the wastes of imperfect competition.

A. M. HENDERSON.

June, 1947.

APPENDIX.

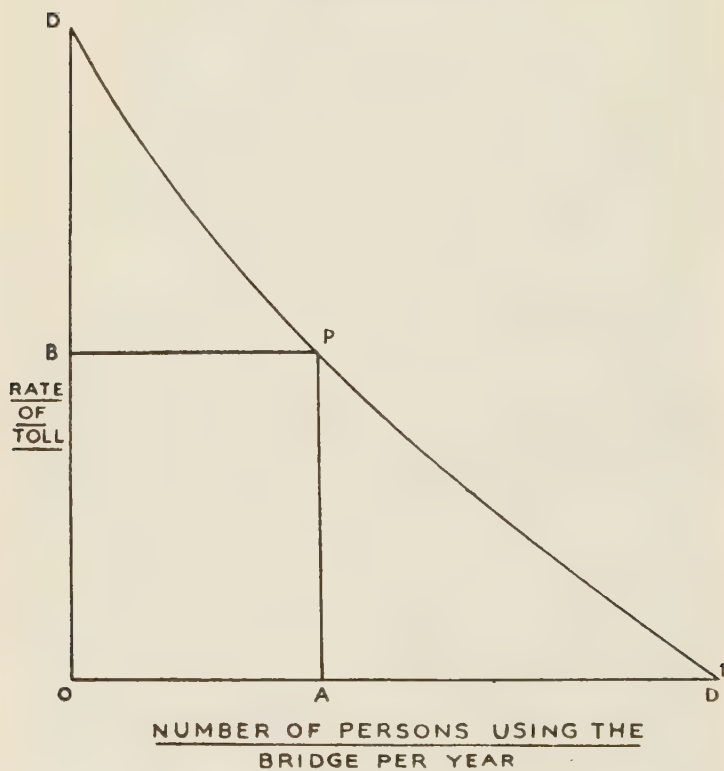


FIGURE 1

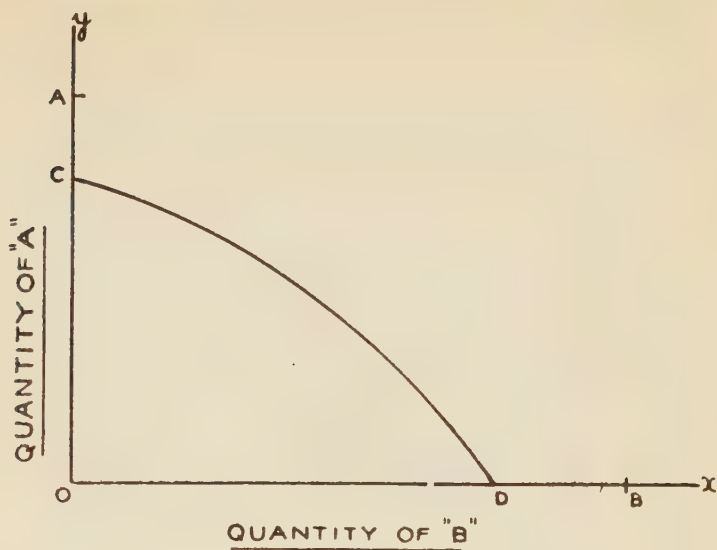


FIGURE 2

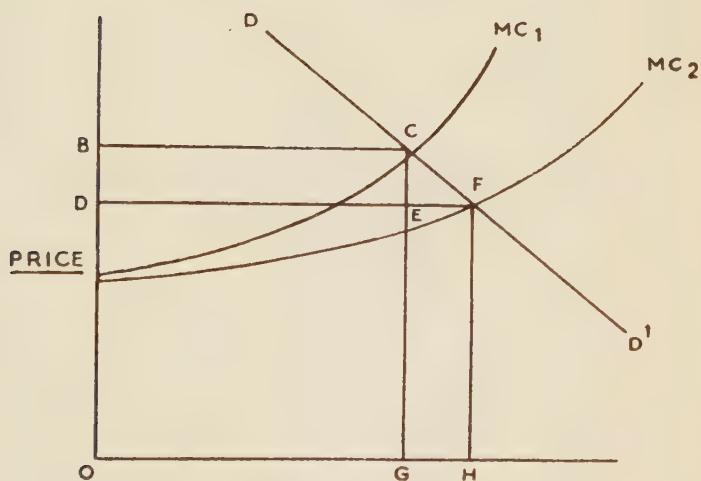
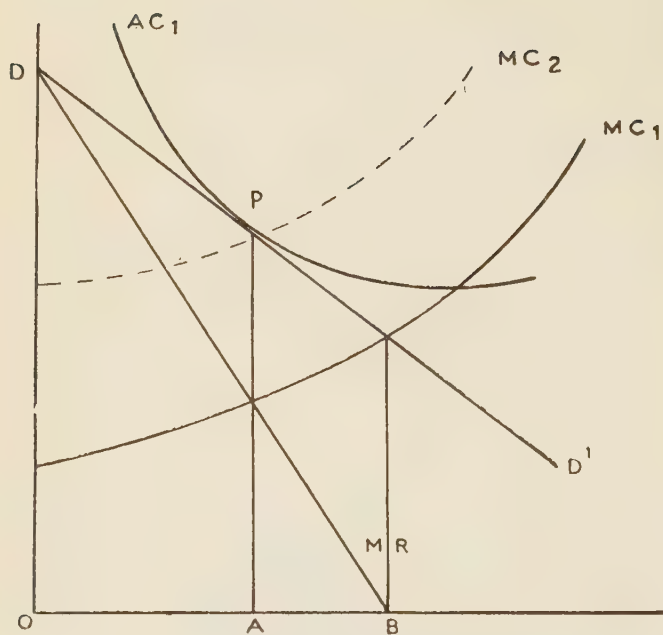


FIGURE 3

FIGURE 4

The Complications of Location

I

Up to a point, the needs and possibilities of industrial location policy are to-day generally agreed. The list of problems may change in order and scale of importance, but basically remains the same as before the war. There are still pockets of local depression, together with concealed unemployment in certain areas of heavy industry where jobs for women have been hard to come by in the past. There remain other areas where the choice of work or the possibilities of promotion are unduly limited. Above all, looming larger as the problem of unemployment and depression diminishes, there is the question of re-shaping the location of industry in and around the big cities. No one has ever disputed that these problems exist ; the question has been how to tackle them.

Opinion on the answer has gone through a number of stages. Twenty-five or thirty years ago the answer of most economists would probably have been to the effect that, in so far as the need was for a redistribution of industry between districts or regions, it could be left to solve itself. For the rest, local planning control would suffice—so far, that is, as the local planning problem was envisaged at all. Depression in South Wales would mean unemployed workers and falling wage levels ; and the resulting emigration of workers and immigration of industrialists would in due course set the balance right. Something of the kind did in fact happen to quite a considerable extent between the two wars ; but, in the face of high unemployment even in the officially prosperous areas, it happened far too slowly. Though there were occasional shortages of special classes of worker in the South, the pressure was never prolonged or powerful enough to persuade many firms to look for sites elsewhere, even when also offered the inducement of relatively low wages in Wales and the North. The alternative type of adjustment, the outflow of labour from the depressed areas, did certainly happen on a large scale. But even here the high national level of unemployment imposed a check, so much

so that in the worst years of the early 'thirties a number of these areas actually experienced a net return flow of disappointed work-seekers from the Midlands and South. And, in any case, the policy of driving workers from their homes to hunt for jobs, at the expense of stable social and family life, provoked too much justifiable resentment to be accepted for long.

By the early 'thirties, in view of the failure of the self-adjustment theory, it was a matter of life or death to the politicians that some definite policy should be adopted. But action was still hampered by the dilemma which appears in its classic form in the Board of Trade's evidence to the Barlow Commission. The Board did not deny that certain social losses—unemployment, bad town planning, and the rest—arose out of failure to control the location of industry; though it prudently left a precise assessment of their importance to another Department. But it did stress that, when all was said and done, employers generally had enough sense to put their works on sites where they could operate efficiently; and, if the State should insist on their taking them somewhere else, the result would be a drop in efficiency and, probably, in the volume of enterprise. An attempt to shuffle industry around to solve social problems would probably involve a conflict with what Professor Abercrombie, in the County of London Plan, has called the "delicate susceptibilities of economics." Let the country choose, if it wished, to put social considerations first; but it must at least realise that there was a choice to be made.

The Board's view seemed obvious common sense; and there was in any case as yet no organised body of knowledge by which to check it. Nor, for that matter, was there any body of experience on which a bold and drastic policy could have been based. The first years of location policy (beginning with the Special Areas Act of 1934) were therefore frankly a period of experiment; and, in view of the apparent dilemma, of experiment of a very cautious kind. The final decision about a firm's location must be left in the firm's own hands; even

negative compulsion, in the sense of banning industrial development in congested areas, only came seriously into the picture after the report of the Barlow Commission in 1940. The system of persuasion and inducement to attract firms to settle in socially preferable areas was to be shaped piece by piece in the light of experience. And, as the reports of the Commissioners for the Special Areas made clear over and over again, the greatest possible scope was to be left for local agencies, in the interests alike of flexibility and of local democracy.

So, step by step, and to the accompaniment of loud political noises, the first machinery was built up. It was scrappy and largely voluntary. Its powers and limitations were distinctly curious; the development of Glasgow, for example, was officially classed as irrelevant to the prosperity of Lanarkshire, and Cardiff's to that of the South Wales bituminous mining area. Yet the machine hung together. An overall directive was provided by the Special Areas Acts and by Parliamentary resolutions. Government departments, within this framework, each made their contribution according to their kind. The Ministry of Labour provided a rough classification of areas of heavy unemployment according to their need, and paid special attention to the transfer of workers to more prosperous districts. The Treasury provided a Fund for capital loans to firms in depressed areas, and the Chancellor of the Exchequer so far swallowed his scruples as to sanction a subsidy in aid of their rent and rates and a remission of taxation. The supply departments offered a preference, other things being equal, to contractors in the depressed areas. The Commissioners for the Special Areas were appointed to cut across departmental boundaries and deal with each region's problem as a whole. Private enterprise rose to the occasion in the form of social service and of the financing of the Nuffield Trust (decidedly the most effective of the Special Area funds) and the Special Areas Reconstruction Association; and one or two firms, the outstanding case being Richard Thomas's strip mill at Ebbw Vale, were induced to move to depressed areas for philanthropic or political motives. Finally, local

interests banded together in Development Councils, representing local authorities, employers, trade unions, and the Universities. The Councils carried on propaganda on behalf of their regions, advised industrialists on sites and facilities, nursed infant industries till they were on their feet, promoted research, and played a big part in starting the pre-war Government trading estates. They also advised on applications to the various loan funds, building themselves up a reputation for efficiency such that under the Government's Loans Facilities Bill of 1939, dropped because of the war, the Government proposed to channel applications for advances exclusively through them. The whole system was effectively tied together by a cat's cradle of joint committees, interlocking directorates, and informal conferences. It was still at the sealing-wax and string stage of development, and the quality of the local organisations varied greatly from one area to the next ; but it grew and, in general, worked. Overlapping was eliminated, the industrialist who ventured near the network was assaulted in all his most vulnerable angles by a disciplined army of regional touts, and by 1939 some 15,000 new jobs had been found on the four trading estates and other sites developed under the aegis of the Commissioners for the Special Areas. The ball had definitely started to roll.

Not yet, however, fast enough. The involuntary motto of the trading estates ("Women and children first") made comparatively little appeal to unemployed ex-miners. The political forces which had pressed for action continued to keep their powder dry. The economic experts began at last to clarify problems on which the hunger marchers had already expressed a more picturesque and politically effective view. The Barlow Commission was appointed, to be followed in due course by Scott and Uthwatt ; and the practical experience of Development Officers and the Commissioners for the Special Areas began to provide more solid ground for future policy. In due course two conclusions emerged, or at any rate appeared to emerge.

First, since the mild methods of the early days, relying largely on private enterprise and action by local bodies, whether

public, private, or mixed, had failed to deliver the goods, something more high-powered and capable of national direction was required—"far-reaching powers to be granted to a new Government Department," as the Minority of the Barlow Commission put it. There was never any serious suggestion of actually compelling firms to go here rather than there: but it did not escape notice that persuasion can be applied in the third degree as well as the first. And, since the location of industry was increasingly seen to be a national problem affecting all parts of the country, and town planning as well as employment, the new machinery must provide for more flexibility and discretion at the national level. There must be more facility for switching attention from one problem to another and for defining priorities.

Secondly, a more authoritarian policy of this kind could be carried out with less danger to industrial efficiency than had been thought; for the dilemma proposed by the Board of Trade was either unreal or, at best, so presented as to weight the choice unduly in favour of what might be called the strict business point of view. It began to be realised that the social factors in location policy might be more important, even in their economic implications, than had been believed. The loss through congestion in the big towns was increasingly felt; and a still more important example, though curiously slow to find its way into the textbooks, was the effect of mass unemployment on productivity and industrial morale. The fact that the Ebbw Vale plant went to a site apparently picked off the industrial dust-heap with a pin can be traced to precisely this source. There is no need to dilate on the reasons why re-equipment and re-organisation were not welcomed with open arms in Durham or Central Lancashire, or why restrictive practices flourished in shipyards which National Shipbuilders' Security Limited did not visit like the nettles in those which it did. And readers of D. L. Burn's *Economic History of Steelmaking* can hardly have been surprised at the undue attention paid in to-day's steel plan to the delicate susceptibilities of Swansea or Lanarkshire.

In any case, experience began to show that, even on the assumption that a penny off profits is a crime against humanity, there was a good deal of scope for adjustment in the pattern of unguided location. Given the compendious ignorance of most medium and small firms of sites and facilities outside a few restricted neighbourhoods, and the fact that they nevertheless seemed usually to find a passable location, it began to look as if suitable sites for many types of industry must in fact be widespread. The same impression emerged from the Board of Trade's Annual Survey of Industrial Development. The choice of sites was usually settled, according to the Survey, not by such basic factors as labour supply or nearness to markets, but by marginal factors such as the place where an employer happened to live or the availability of a disused shed in one place rather than another ; once again, it looked as if the basic factors must often be fairly well provided for in most parts of the country. Often the marginal factors could easily enough be altered—and here the war in due course provided confirmation on a big scale—by a comparatively small effort ; workers could be re-trained, for example, or trading estates could be built. Or, again, a firm tied to a particular district might have a fairly wide choice of sites within it ; a Stepney firm, say, might be ready to move to Welwyn but not to Whitehaven. In general, it began to look as if even strict business criteria for location policy would leave enough elbow-room to satisfy the town-planner, the politician, and the economist—the economist, that is, with his interest in productivity and full use of the national resources—as well as the shareholder and the *entrepreneur*.

All this went to strengthen the case for more high-powered location control : and on top of it came the war and its aftermath, bringing the need to plan production centrally and to ignore (within limits) the profit and loss criterion. Permits and official influence became essential tools of the trade, and the battle for survival was transferred from the higgling of the market to the backrooms of Whitehall. Up to a point, the centralising tendency was inevitable ; and, inevitably, it helped to propel thinking about the location of industry still

further along the path of strict Governmental, if not of necessity actually centralised control. For the time being at least, if one from among the shoals of applicants for workers, premises, or raw materials did happen to be strangled at birth by red tape, there were plenty more to take its place ; for the enterprising firms which, in a world of unemployment, had once been greeted with the red carpet and the fatted calf were now suppliants at Dives' gates. New, if not always accurate or judicious, ideas gained ground in the official world, and a good deal of past experience was lost in the shifting sands of the wartime Civil Service. By 1944, when the possibility of depressed areas and the need for action in town-planning began once again to loom ahead, the state of mind of the responsible Ministers and officials seems to have been summed up in the belief that something drastic must be done and that they were the people to do it. The nucleus of the necessary new machinery was also by now ready to hand in the wartime Factory and Storage Control of the Board of Trade, the location planning room of the Ministry of Production, and the wartime licensing of building.

So in due course there was fashioned, in place of the former multiplicity of agencies, the present exclusively Governmental planning machinery. The basic decisions on location policy are taken at the Cabinet level. At the next level, policy is supervised and controlled by the national Distribution of Industry Panel, a committee of senior civil servants with the Board of Trade's representative in the chair ; while a high degree of initiative, and the main responsibility for day-to-day administration, rests with other Distribution of Industry Panels at the regional level, constituted in the same way. The executive responsibility for carrying the policy out falls in some measure on a number of Government departments, but primarily on the Board of Trade ; it is with the Board that the aspiring industrialist makes contact, and the President of the Board answers for location policy in Parliament. The whole machinery is managed and staffed by the departments of the Central Government or their direct agents, such as the trading estate companies. The pre-war ideal of initiative and

self-help on the part of the people and interests directly concerned has disappeared into the dustbin.

II

Now this machinery, as it now appears—and still more as it is likely to appear in future has many unattractive features ; and especially when it is considered along with the effect of recent changes in the law and practice of physical planning and the general proliferation of controls. It has, of course, its detailed administrative defects ; but it is not primarily these that are referred to. If the Board of Trade has had difficulties in building up its staff, or has not yet had time to tackle the problems of non-priority areas or build up a satisfactory division of labour with the Ministry of Town and Country Planning, everyone will recognise that these are temporary faults, teething troubles aggravated by post-war dislocation. The real objections are more fundamental.

In the first place, it does seem probable that once the wartime backlog of new developments has been worked off, the effect of recent changes in the machinery for controlling location, taken together with other related controls, will be a dangerous discouragement to enterprise. Over and above any obstacles which may have existed before the war, there will, once the Town and Country Planning Act is in full operation, be three permanent and substantial hurdles in the industrialist's way. First, he will henceforward have, in the vast majority of cases, including large numbers where nothing of the kind was required before, to obtain a local planning permit ; and the intention of the Town and Country Planning Act is that this should be anything but the formality which it frequently was in the past. Secondly, by the terms of the Act, no such permit can be granted without a certificate from the Board of Trade that the application is consistent with the proper distribution of industry. Once again, the intention is that the grant of this certificate should be anything but a formality ; and industrialists are already only too well aware of the Board's tendency to allow a firm to go anywhere it likes so long as it is South Wales. Finally, having accumulated his permits and

acquired his site—and, whether or not the two permits take longer to obtain than one, the mere fact that there are two is likely in future to prove a real discouragement—the exhausted enterpriser will be visited by emissaries of the Central Land Board, who will extract from him a totally unpredictable tax to be levied according to principles variable from case to case and determined in semi-secrecy (see the Minister's own statement in Standing Committee) by the Minister for Town and Country Planning ; and against this tax there will be no appeal. There will, on the other hand, be considerable delay in assessing it : for it appears that the District Valuers, on whom the burden will fall, are already loaded up to and above their capacity. Perhaps the business man may not in the end pay more than at present ; but he will have two bargains to strike in buying his land instead of one. And, more often than not, he may have the additional delay involved in a compulsory purchase order ; for the Town and Country Planning Act's provisions seem designed to reduce to a minimum the incentive for the landowner to part with his property. The owner who retains his land in its existing use may enjoy its rising value in peace : the owner who sells (or merely redevelops) loses it on the spot.

The big firm with a settled proposition for serving a definite market may come to little harm through this process. But how about the more speculative type of enterprise, vital to industrial progress, but much more difficult to make convincing to an outside examiner and much easier to discourage ? And, it should be added, certain presumably temporary obstacles have been left out of the account. A firm has at the moment to obtain the patronage (shades of Lord Chesterfield !) of the appropriate Government Department before the Board of Trade will even consider its application ; and there is also the building permit and, of course, the shortage of materials and capital equipment. The final impact of all this on the miserable trader's morale—even allowing for the genuine benefit which he receives from the sponsorship system and other Government help under existing conditions of shortage—was neatly summarised in evidence heard before the Select Committee

on Estimates,¹ during its inquiry into the administration of Development Areas. Control of location taken by itself is one thing, and its significance as one of a cumulation of obstacles quite another ; and it is on the cumulative effect that attention needs to be focussed. For what to the controller in a particular department or region looks like—and is—an admirably stream-lined piece of administration is liable to look to the Wandering Jew in search of a site very much like the last straw. To the firm struggling for a couple of years from London to the South Coast, Wales, and finally a site in the South-West, and ploughing from Department to Department till it finally bogs down for six or seven months in the Ministry of Health, it is not much consolation to know that each separate one of the Departments and regional offices concerned is doing an admirable job of work in its own sphere. The business man may be duly grateful for the Board of Trade's efforts to overcome his difficulties with controls and bottlenecks ; but he may still have a shrewd suspicion that more care in devising the controls or a little more attention on the part of, say, the Chancellor of the Exchequer might have prevented many of his problems from arising at all. The curse of the specialist, in or out of the Civil Service, is that he sees only one thread of the tracery which tangle themselves together on the business man's desk.

Secondly, there is the effect on public confidence and industrial morale of the secrecy and administrative discretion attached to so much of the present machinery. Public opinion has recognised that the problem of potential depressed areas deserves very high priority, and is not disposed to ask too many questions about just how the job is done. But will that mood last once the worst danger of depression in the Development Areas is over—as, on the Board of Trade's own estimate, it should be within the next two or three years? Even before the war, the apparently indiscriminate favouring of certain areas led to rumblings of discontent in (among other districts) Birmingham, Manchester, Glasgow and Merseyside, of which

¹ Second Report (*The Administration of Development Areas*), 1946-7 : Minutes of Evidence, p. 313 (21st February, 1947).

the Barlow Commission's evidence took note. The distribution of subsidies under the Special Areas Acts was already by way of being a game of poker between the Commissioner and the prospective beneficiary, with the most plausible cases away in the lead. These things aroused comment even at a time when their influence on location was comparatively small. How will it look in future, in view of the more powerful means of inducement now available, if Leeds has reason to think that Bradford is given more than its fair share of attention, or X and Sons for suspecting that Y and Company have spun a tale to the tune of £10,000 off their development charge? Or if the Government's public information service is still suspected of supplying, not the full range of information needed to allow a proper balance to be struck between social factors and the efficiency of individual firms, but only as much as will satisfy the employer and induce him to settle in a particular place? This sort of thing may pass now: but will it still pass when the social factors are no longer so overwhelmingly important as they are in the case of the Development Areas?

Or, again, if rumours continue to circulate, with every appearance of authenticity, to the effect that the grant of a permit for such and such a site was related less to economic and social considerations than to the political pull of such and such a Town Council, or the excellent connections of the Managing Director in the higher reaches of the Civil Service? "Valuation is valuation," as the General Manager of North-Eastern Trading Estates Ltd. told the Select Committee, except when adjusted by the District Valuer for the purposes of the distribution of industry: and curiously little has been heard in public about a factory building subsidy in the Development Areas on a scale fit to make a mere housing authority's mouth water. This kind of thing may (or may not) be inevitable in tackling an emergency problem by emergency means; but it is hardly a feature of the national life to be encouraged in the long run.

Such things, of course, would happen under any system. But it is important to remember the subtle distinction between the political effects of open competition for development, with

the initiative left in local hands, and discrimination by a supposedly impartial national authority. If Town A, by quickness off the mark or better salesmanship or facilities, secures a bigger volume of development than Town B, it may indeed be that cries of injustice will arise and that Town B will run crying for help in Whitehall. But if the competition has been limited to means generally accepted as fair—and on this more below—the net effect on public opinion is likely to be very different from what could be expected if Whitehall itself forbade the two to quarrel and then proceeded to indulge in real or apparent favouritism on its own ; for defeat in fair competition in an open market is one thing, and a crookedness in the fountain of justice is another. The market is recognised as a place for a fair fight and no quarter : whereas the trouble about the State, as Mr. Schwartz not long ago reminded us, is that in its operations “equity sooner or later rears its ugly head.” And, once the objectives of location policy cease to be as clearly and unarguably defined as they are now—and that means in a couple of years’ time—favouritism or the appearance of it will be very difficult to avoid. Justice calls for clear criteria ; and once the State loses its clear criteria its work, in a matter of this kind, can hardly avoid taking on something of the atmosphere of the ante-chamber. Much more publicity, much more opportunity for a local voice in policy—particularly for an area to have its claims thrashed out in public in fair competition with those of others—and much less administrative discretion in relation to individual cases are all clearly desirable.

Thirdly, it is important to notice that location of industry policy has hitherto been directed to only one of its two main objectives ; to solving the employment problem, that is, with the town planning problem left out in the cold. Purely Civil Service machinery has worked reasonably well in catching firms which are in any case on the move and re-siting them in areas where workers are ready and waiting for them. Will it do quite so well in relation to the very different problem of moving firms and workers together out of, say, Central or East London ? In the light of a recent report by the Stepney

Reconstruction Group, shortly to be published—apparently the only really detailed study of this problem—it seems highly improbable that it will. An immensely complicated sorting out of social and economic relationships will be needed if the move is to take place without serious economic dislocation and grave social disadvantages ; and, as the report makes clear, it is unlikely that this sorting process can be carried through effectively without the active participation of the local authorities, employers, trade unions, and other local bodies immediately concerned.

Fourthly, there is the question of the overloading of the Civil Service with work ; an overloading of which the regional offices of the Board of Trade have provided some striking examples. A list was quoted above of some of the functions which used to be discharged before the war by local and regional organisations, in close co-operation (in the case of the former Special Areas) with the Government's Commissioners. Such functions as supplying information about local sites, showing industrialists round a district, nursing new firms, starting trading estates, advising on the credit status of new concerns, or promoting research on regional problems, used to be discharged on a local and, frequently, voluntary basis by Development Councils or, in the case of research, the Universities. The voluntary bodies, as usual, were of very varying quality : grass-roots democracy, whatever its merits, rarely runs with clockwork precision. Yet in spite of bad patches—curious things, for example, have happened to the development movement in Wales—their work was done with real efficiency in more than one of the depressed areas ; and often, it should be added, with a remarkable degree of regard to national needs. In certain cases, indeed, it was discharged better than at present. The research work done in this way by the Universities, for example, often for the purposes and on the initiative of the Development Councils, was frequently as good in quality as anything in progress to-day, and had the great advantage over Government research that it could be and was intended for publication. Perhaps the most striking illustration of recent trends is the fate of the official trading

estate companies. Set up by the Commissioner for the Special Areas—himself a business man—as autonomous public corporations under strong local influence, they have to-day been forced by the curious accounting principles of the Board of Trade into day-to-day dependence on the Board and Treasury for even minor matters of salaries and capital expenditure, with a heavy resulting delay in operation and loss of local interest.

Inside and outside the estates, in spite of growing staffs and of the Board's best efforts to minimise headquarters control, both red tape and overwork appear to have increased and multiplied; and there is at least a hint of a case for reviewing administrative methods and handing back as many functions as possible to local agencies, where these exist or can be created. In one or two regions, such as the North-East Coast and Scotland, something of the kind has already been done, and a recent advance has been made on Merseyside. In West Cumberland something like complete integration of national and local agencies has been achieved under the benevolent aegis of Mr. J. J. Adams, Secretary of the Cumberland Development Council, Managing Director of the Trading Estate Company, Deputy Regional Controller of the Board of Trade, and a prominent Alderman of the County Council. It is said that in all the voluminous correspondence of recent years about the West Cumberland Development Area the one constant feature has been the signature. But Cumberland is a little out of the ordinary. It is perhaps at least a sign of good intentions that other regions are inclined to claim more in the way of use of local agencies than has been—still more could be—actually achieved.

Finally, there is a more general point. "Democratic planning" is a hazy term; but, if it means anything at all, it surely implies a maximum of freedom for personal and corporate initiative and some voice—as big a voice as possible—in any plan for the people intimately affected by it. Under the existing system local and regional responsibility for both planning and action on location—meaning by regional responsibility, responsibility to people in the region as apart

from the responsibility of regional officials to Whitehall—are reduced to a minimum : and in the absence of responsibility neither intelligent discussion of policy nor even (in some areas) responsible behaviour on the part of local groups and authorities has been as common as a healthy democracy requires. The onus of proof is not on those who seek to show that the existing Governmental machinery for dealing with location is partly or wholly unnecessary. It lies rather with those who maintain that a proper distribution of industry can only be achieved by the present limitations on public discussion and on local and private initiative.

III

That, of course, is the key question. It would obviously be unreasonable to expect the officials actually running the machine to appear in public beating their breasts and confessing to bureaucracy and incompetence. But the minutes of evidence of the Select Committee on Estimates showed clearly enough that, with a little persuasion, they could be persuaded to admit the truth of quite a substantial part of the criticisms just outlined. What they were not prepared to do was to conclude that, because of these criticisms, the machine should be fundamentally altered ; for after all, they naturally argued, is it not the main point that the results aimed at have actually been forthcoming ? A queue of firms has formed on the doorstep of the Board of Trade, clamouring, in the absence of sites in London or Birmingham, for locations in Cumberland or South Wales. Counting only direct employment in factories, and ignoring indirect effects on the local service trades, some quarter of a million new jobs were in prospect in the six Development Areas in the spring of 1947 in schemes covered by the Distribution of Industry of 1945. Realisation admittedly still lagged far behind ; but the lag was due to shortage of bricks and mortar and not of firms applying for space. And, though mistakes have certainly been made, there is no reason to think that any large part of the new developments will prove wildly uneconomic. The problems to be solved are urgent, and, if these results have been due to the

present official machine, its existence (with all its faults) is clearly justified.

But have they been? Is it really true that no alternative machine, with less red tape and administrative discretion and more publicity and local initiative, could have been found to do the work—or, at any rate, could now be found to take it over for the future? Is it possible to reform either the method of making and enforcing location planning decisions or the accretions of other financial and physical planning controls which have grown up and come to be associated with location planning in the minds of industrialists and the public? The existing system falls short in two main respects—in its relation to democratic and particularly local discussion and responsibility and in clearing the path of the business man. The structure of the planning machine is the worst offender from the point of view of democracy, and—though the machine plays its part here as well—the financial red tape and development charge mechanism from the point of view of the business man. What can be done under either heading?

It is clear, in the first place, that a great deal of detailed simplification and decentralisation would still be possible on the financial side and within the framework of the present machinery. So far many of the officials themselves are prepared to go; and it seems that something on these lines is now the policy of both the Board of Trade and the Treasury. In the field of research, the Board has frankly admitted its inability to provide an adequate service without the help of the Universities and of bodies such as the West Midland Group or the North-East Development Association. In the case of finance, the Treasury representative told the Select Committee on Estimates that the definite aim was to return to the pre-war position in which the trading estate companies were left to their own devices in day-to-day affairs, subject only to presenting their annual budgets and accounts. The intention appears to be that rents on the estates should in due course be raised to an economic level, and that, once the companies are thus enabled to pay their way, detailed control should cease. And thirdly, on general administration, the Minister of Town

and Country Planning stated during the Town and Country Planning Bill debates that he intended to investigate means of reducing the number of separate applications which a business man must make. One application and one official document should if possible clear the applicant for development charge, national control by the Board of Trade, and local control by the physical planning authority; though, as the Minister very frankly added, he had not for the moment the remotest idea of how to bring this eminently desirable state of affairs about.

It would also certainly be possible to hand back to development councils and similar bodies a good deal of the detailed local work taken over from them after 1939, and to use more local advice and assistance in problems such as those likely to arise in Greater London. Progress would have to be gradual and piecemeal, in view of the rickety state of a good deal of this machinery, and in a good many areas local agencies would have to be built up from the ground: of which more later. Yet progress in this direction could certainly be made. In this instance, however, there seems to be a curious official reluctance to act. It is argued on the one hand that local bodies cannot be relied on to take sufficient account of Government policy—to direct attention to one site rather than another, for example, in showing an industrialist round a district—and on the other that firms themselves often prefer their applications to be treated with strictly official discretion. Neither argument receives much support from pre-war experience on the part either of Government departments (particularly the Commissioners for the Special Areas) or of the voluntary development movement. There are certainly a few black sheep among the officials of the movement, and corresponding possibilities of irresponsibility and indiscretion; but the location of these animals and the means of avoiding them are reasonably well known. Local authorities' exercise of their powers in planning matters should for the future be kept under very adequate control, if the expressed intentions of Government Departments are anything to go by; and the voluntary development movement depends and must continue to depend

for most of its money and influence on official support of one kind or another. The Commissioners for the Special Areas found that this particular lever was by no means difficult to use. And, where no specifically national interest is concerned, it might well be assumed that it is best in the long run to let local interests make and pay for their own mistakes, including their mistakes of indiscretion. It is very probably true that the Welsh Regional Office of the Board of Trade can make a technically sounder decision on a matter of this kind than the Glamorgan County Council. And yet, the cynic might ask, if the Welsh insist on ruining their own country, who are the English to stop them? And how are the local interests ever to learn responsible behaviour in this matter unless responsibility is thrust upon them?

Another case where reform, though technically possible, is unlikely in view of official attitudes is over development charges. It would be possible to cut out the delays due to haggling in individual cases, to eliminate discrimination between firms, and largely to prevent the recovery of betterment from acting as a tax on development, by applying to all land something on the lines of the Uthwatt proposals for a betterment levy in built-up areas. The Town and Country Planning Bill transfers to the State the landlord's right to benefit from development, paying a global sum by way of compensation, and leaves the State to exercise this right, in the same way as the private landlord, by higgling with each separate developer. The Uthwatt Committee proposed, by contrast, that the landlord in a developed area should keep his redevelopment rights, and be compensated case by case (not by a global sum) where they were impaired by the prohibition of development; and that the State should recover betterment by a flat 75 per cent. national rate on all increases in site values¹ in built-up areas, other than values directly attributable to the owner's expenditure. The developer would in this way have been left with only one actual bargain to make, namely

¹ Taken, for this purpose, as existing use values in the sense of the 1947 Bill. A change in the existing use between two valuations would, however, attract an increased assessment for betterment levy.

with the landowner, and would have known far more precisely than under the 1947 Bill just where he stood in relation to the betterment charge. Even more important from his point of view, the State's claim on him would have been legally defined and challengeable through the ordinary machinery of appeal ; the fear of favouritism, very real to-day in view of explicit Ministerial statements, would have been largely eliminated.

Compensation under the Uthwatt scheme would certainly have cost more than under the current Bill. On the other hand, betterment would have been recovered from the landlord clinging to his land in its existing use as well—if not on the same scale—as from his more enterprising brother. Its total amount would in all probability have been greater, especially if, as certain members of the Scott Committee suggested, values for compensation purposes had been legally linked to those for purposes of betterment. If extended to all land—and the difficulties foreseen here by the Committee do not seem insuperable—the Uthwatt proposals would have represented a clear gain from the point of view of encouraging enterprise and simplifying development procedure, and no necessary loss from any other. The case in their favour is clear. But the time to implement them is unfortunately past, at least for the moment ; for, with a new Act on its way to the Statute Book, it would be Utopian to expect the defective system under the 1947 Bill to be duly nailed in its coffin for a number of years to come.

Looking at the matter in terms of practical possibilities, it seems clear that the financial and administrative changes so far suggested are, as a whole, by no means a matter for immediate action. A great deal can be done over a period of years : but what can be done here and now is of very limited scope. It is possible immediately to trim some of the weeds which have grown up around location control, but not to deal with the worst tare of all. And, even looking further ahead, the changes would of course leave the basic character of the existing machinery of location planning itself very much the same as at present. The main decisions would still be taken in the Civil Service, and local responsibility strictly limited ;

administrative discretion by a single national authority in relation to individual firms' cases would remain in all its glory ; the load of work on Civil Servants would be only slightly reduced ; and it would still be necessary for firms to obtain a national as well as a local planning permit, in addition to bargaining with the Central Land Board. Can anything be done to improve, not merely the incidental accompaniments and accretions of this machinery, but the machinery itself ?

IV

The first need at this point is to be clear precisely what the distribution of industry machinery is trying to do ; and three circumstances seem particularly relevant. First, planning the location of industry even to-day is by no means a precise operation. It is impossible to say with precision what the employment needs of an area may be ; the prospects of existing industries ten or fifteen years ahead are a matter of guesswork, and, in small areas, there is the possibility that a changing proportion of workers may travel into or out of the area to work. It is equally hard to predict the impact of new industries. The Board of Trade's pre-war Annual Survey of Industrial Development brought out the fact that, among managers of new independent or branch plants employing a hundred or more, barely two out of five came anywhere near an accurate estimate of their employment prospects for even a year or two ahead ; it might have been still more illuminating to have their forecasts and realisations for five or ten years in advance. The indirect repercussions of new industries on minor local trades may also vary immensely from place to place. To this must be added the varying circumstances of individual firms and the need to proceed case by case, not by rule of thumb ; and, arising both from this and from the unpredictability of so many factors in location, the need to leave a good deal to the discretion of the manager of the plant concerned. The latter point is sometimes wrongly stated in the form that, in a private enterprise system, it is necessary to rely on persuasion and inducement because compulsion would leave too narrow a margin of responsibility to the private

owner. The real point is surely that under Socialism or Capitalism alike the circumstances, needs and prospects of individual plants within a given trade are likely to vary greatly ; that the management of the concern, though its view may be limited in relation to certain social factors, is likely to have a fuller grasp of the facts relating to it than any planning agency ; and therefore that the right attitude for the planning agency is to weight the factors affecting the management's decision, but to leave the final decision itself in the management's hands.

At any rate, the general conclusion is clear. There can be no question of an omniscient planner giving detailed orders from above. It must be—and is even to-day—a case merely of influencing the course of the stream of enterprise. Pressure is needed to induce it to flow in the right direction, and weirs and embankments to keep it at the right level and safeguard key points ; but it is primarily a case for general measures to influence the stream, not for detailed planning of the sites of individual firms.

Secondly, one of the most effective of the means used to-day to put pressure on firms to move to areas where workers are available—Development Areas, new towns, or whatever they may be—is one which needs no special location planning organisation ; namely general full employment. With two exceptions, the inducements such as trading estates, capital advances, and the like available to the Board of Trade to-day amount to little more than was available in 1939 ; but, in a world of full employment, the same inducements have become very much more effective. With unemployment down to one or one-and-a-half per cent. in the Midlands and South, there has been heavy pressure to influence new or growing firms to look for workers elsewhere ; and this has been a primary cause of the success achieved in the Development Areas. If the new machinery appears to have done better than the old, it is at least partly because of the conditions in which it has had to work. Full employment has gone some way towards making the classical theory of self-adjustment once more applicable to current conditions ; and this truth must not be obscured by

the fact that here, as everywhere else, inflation and over-employment have surrounded the problem with new complications.

There remain, however—thirdly—the two exceptions, which have played a greater part even than full employment in the recent achievements of the location machinery. One is the point of temporary application, brought out with force by official witnesses before the Select Committee on Estimates, that in the existing shortage of materials only official support can enable the firm moving to a surplus labour area to settle in with reasonable speed. In the inter-departmental battle for priorities a friend at court is an ever-present need ; and, until conditions ease, it may fairly be admitted that here is a conclusive argument for detailed Government intervention.

But an argument which will cease to be conclusive will as inflation and bottlenecks are overcome and it becomes possible to move back from a world of direct controls to one where the market again provides a reasonably smooth means of adjustment and source of supplies, is a poor guide to future policy ; heaven forbid that it should be otherwise. It is the other exception which provides the crux of the matter. The Barlow Commission recommended, with emphasis varying between its Majority and Minority members, that negative powers should be taken to restrict industrial development in congested or otherwise undesirable areas ; and these powers have now been granted, pressed down and running over. While it is probably true that full employment in the Midlands and South has been a leading cause of success in the Development Area policy, it is certainly also true that the licensing powers available under Defence Regulations, and to be continued in a new form under the Town and Country Planning Act, have been the most important weapon of all. They have made it possible to limit the amount of factory building work started, and to prevent attempts by firms to force their way into labour-deficit areas by poaching workers from established concerns, with unfortunate results on labour turnover and the fight against inflation. It has been possible to insist that the self-adjusting process should be almost exclusively one of taking the work to the

workers, and not the workers to the work ; the second alternative, apart from its social disadvantages, being at the moment ruled out as a general policy by the housing shortage. Thanks to licensing, rapid progress has likewise been made in breaking down the sheer ignorance which formerly prevented so many firms from going to what are now the Development Areas ; for firms have been required, as a condition of granting a permit, at least to consult the Board of Trade's national information service on sites and facilities. It may be impossible to wean a fool from his folly ; but at least he can be deprived of the excuse of lack of good advice. It is probably true to say both that, even without full employment, it would have been practicable to use pressure through the building licensing system to force a considerable number of firms to move towards the Development Areas, and that without the licensing system even full employment would not have prevented a good deal of unwarranted industrial development in areas like London and Birmingham. Could these controls have been exercised, or can they be in future, by local agencies acting on general rules under national direction ; or is it inevitable that they should be enforced through direct action by a national authority with discretionary powers ?

The answer appears to be that up to now they could not have been applied in any other way than at present ; but that in future the machinery of town and country planning, as revised under the Act, should be sufficient to meet the case. Hitherto, two conditions have held. First, there has been a shortage of building materials and capital equipment so acute as to require, not merely the channelling of demand in certain directions and a global control of allocations, but detailed scrutiny of individual cases by a national authority. The significance of this in the case, for instance, of the trading estate companies, where there has been a genuine desire to decentralise control, stands out in the evidence of the Select Committee. Secondly, the machinery of town and country planning has been totally inadequate as a means of controlling either the volume of industrial development or its distribution between districts and regions. The atomisation of planning authorities, the lack of

effective national control of local plans, and the limited scope and flexibility of planning technique have meant that, in effect, town and country planning has imposed no control of this kind at all. In view of these two conditions, detailed control of individual projects by some national authority such as the Board of Trade and the Distribution of Industry Panels has been inevitable; and, it is only fair to add, would have been inevitable even if the effect of the shortages had not been grossly exaggerated by inflation.

The first of these conditions will presumably be remedied little by little over the next three or four years; there is no need to wait for every shortage to disappear before substantial freedom of the market is restored. The second will likewise be remedied—or, at any rate, if knowledge of staff shortages and memories of what has happened under previous Acts allow one to be optimistic, should be remedied—not too long after the end of the three years from the appointed day under the Town and Country Planning Act allowed for planning authorities to complete their surveys and present their development plans for national approval. The new authorities—Counties, County Boroughs, and combinations of them—are large enough to handle a fair volume of business and employ competent staff, and few enough to be kept, where necessary, under close and regular control by the national planning authority; and the intention of the Act is that their plans should be far more flexible, more closely drawn, enforced with more vigour and attention to detail, and more subject to national control than was usual in the past. The development plan itself, as it appears on a map, may look very like a glorified version of the traditional zoning scheme: but, in view of the new machinery, powers, and spirit of the Bill, there should be very different attitude both in its background of policy and in its enforcement. The tighter national control is particularly important from the point of view of location, since there can be little hope of effective guidance of location unless a firm limit can be set to the amount of industrial development allowed in the more prosperous areas: and in industrial areas it takes a strong-minded authority to restrict its own development

without a little encouragement from outside. But, given the tighter control and other changes proposed by the Act, it should become possible to prepare for each area a kind of Level of Industry Plan (saving the phrase !), indicating the approximate level and types of employment to be aimed at in the national as well as the local interest ; and to couple with this a timetable showing the approximate stages by which the plan is to be realised. Control of location on these lines would of course mean a real simplification of procedure only where local planning units were fairly large areas. For, in small areas, such as those of the majority of the traditional planning authorities, the number of cases arising would be so small that the employment of an adequate staff would be impracticable ; and, in view of the large size of many individual projects relatively to local needs for development, there would be a need for continual exceptions, modifications of the plan, and consequent reference to a higher authority. From their point of view the Act should make an immense difference ; for an authority such as the Lancashire County Council or the proposed new Manchester and District Council is a very different matter from the old-style planning authority on the level of the Borough or County District.

It should also be possible to use national approval of local plans to control the growth of secondary means of influencing location, such as trading estates or the grant by local authorities of special facilities to new or transferred industries. The administrator's nightmare (by no means unjustified in the light of past experience) of an orgy of competitive expenditure on inducements to industry need in fact never materialise. The more conspicuous under-the-counter weapons of inducement used in the past are now being removed from local control, including particularly gas and electricity charges and valuation for rates. And, in the case of the more open and effective methods which involve factory building, estate development, or cheap loans and grants of land—the kind of thing done by Liverpool at Speke before the war—there are perfectly adequate powers of control in the hands of the District Auditor, the Ministry of Health, and the Ministry of Town and Country

Planning. These forms of inducement will often be legitimate enough : but their use not only should but can be restricted within limits prescribed in connection with each area's plan.

Local plans on these lines, drawn up under national approval, and subject to regular revision, as well as to special appeal to the national authority in individual cases, should make it possible both to limit the channels through which enterprise flows and to control, in a rough and ready way, the pace of development in each trade and district. Rough and ready the control would certainly be ; but, in view of what has been said above, that need scarcely have even the appearance of a disadvantage once the acutest phase of material and equipment shortage is over. Given the mechanism for appeal and rapid revision provided under the Act, it should be possible to draw the control limits closely enough to meet all practical needs—once, at any rate, the present need to give absolute priority to the Development Areas has passed.

From the industrialist's point of view, the result of the proposed change would be that one permit from one authority would henceforward clear him for location of industry control, building controls, and the protection of amenities ; for the planning authority could only grant him a permit if his proposals were in fact consistent with the nationally approved provisions of the local plan. The national control of location would become a control of local authorities' plans and administration, and no longer directly of individual businesses ; and the one-document control sighed for by the Minister of Town and Country Planning would become a reality. Or, at any rate, remembering what the Minister intended it to cover, as near to a reality as the retention of the 1947 Bill's form of development charge will allow. If, as would almost certainly be the case, it were still desirable to insist that a firm should at least consult the national information service on sites and facilities, a certificate of having done so might be made a condition of the grant of a local permit—hardly an onerous obligation, and not quite the same thing as the rule under the Town and Country Planning Act that a firm must have a certificate of actually conforming to the Board of Trade's view of the proper location

of industry. A compulsory interview is poles apart from practical compulsion to choose a certain site.

In terms of time, the saving to the business man under the new procedure might not always be great. The Board of Trade very reasonably point out that, given the variety of other formalities to be fulfilled, an application for the Board's permit can usually be cleared under the existing system while the applicant is still negotiating his other hurdles. But the psychological value of having only one authority to deal with would be considerable, particularly in marginal cases ; and all the more so since, local authorities being what they are, the bias would tend to be more definitely on the business man's side than is the case to-day. In promoting enterprise, as in commerce, there is something to be said—within limits—for the doctrine that the customer is always right.

From the point of view of local government and democracy, the advantage would lie in the return to the local level of much of the initiative in preparing location plans, together with much of the responsibility for administering them ; and this without much actual increase of work or central supervision, since development plans will in any case have to be prepared and nationally approved, and firms will in any case require local planning permits. Local planning staffs with a wider economic training than at present would of course be required. But, here again, the need will arise in any case in connection both with the preparation of plans and with town planning control of small businesses : and it is in fact already recognised in the new planning curriculum adopted in Durham University and under consideration elsewhere.

For Government departments and their regional offices, the advantage would lie in dealing with a hundred and forty or so largish planning authorities¹ instead of a multitude of individual firms ; and in dealing with them at reasonable leisure and over broad issues of policy, instead of on niggling details and in an atmosphere of continual rush.

Finally, from the point of view of good government in general, there would be two immense gains. The worst

¹ In England and Wales.

danger of individual discrimination between firms would be removed, since the central government would henceforward deal with location policy by global measures and according to general rules. Local planning authorities would still have discretion in individual cases; but discretion exercised separately by 140 authorities is not quite the same thing as discretion exercised by one agency for the whole country. There is all the difference in the world, from the consumer's and political point of view, between monopolistic competition, with a competitive accent, and a vigorously discriminating pure monopoly in an unassailable legal position. They may often do the same things: but they look very different to the consumer who in one case has a clear choice and in the other has—or, to put it in a way that is perhaps fairer to the Board of Trade, feels he has—not. And, secondly, the policy behind location control, being incorporated in county and borough development plans, would henceforward be brought out into the open and subject to full public discussion.

V

If it be granted that the principle of what has been suggested is desirable, it remains to consider the time-table for putting it into action. There are three stages to take into account, covering respectively financial decentralisation in the case of the trading estates and similar matters, together with increased use of local agencies for research and other auxiliary purposes; the reform of location planning machinery, the shift of its emphasis from the regional offices of central Government departments to local planning authorities, and consequent administrative changes; and an overhaul of the Town and Country Planning Act's machinery for dealing with development charges.

Stage (1) can begin, and indeed has begun, here and now. To a great extent, what needs to be covered in this stage is already a matter of Government policy for application in the immediate or near future; and there is no reason why much of the rest should not follow in the same way. The exact pace

would depend on the local agencies available, and would therefore vary a good deal from region to region; for, if more use is to be made of local organisations, a review of such bodies is urgently needed. Their history has been covered in a recent survey¹; but a new investigation is needed into ways and means of bringing organisations in other areas up to and above the level of efficiency attained, say, on the North-East Coast. Accidentally or by malice aforethought, the Select Committee on National Expenditure stumbled upon the area where such bodies are to-day most effective, and spent most of their time there; readers of their report would do well to remember that in, say, Wales or the South of England the position is very different.

The greatest need, in view of the importance of giving strong backing to local authorities undertaking mandatory surveys under the Town and Country Planning Bill, is to increase the number and resources and overhaul the working of regional research organisations such as the West Midland Group or the research side of the North-East Development Association. These bodies are doing a job of applied research which cannot be done by Government departments or local authorities, and is not the business of the Universities—one parallel, in fact, to the work in another sphere of the industrial Research Associations. But their work is of very varying value, and their constitutions—particularly in the relationship, in some cases, to development organisations with a very different outlook from a research body—need an overhaul. They are irreplaceable as a class: but individually they stand in need of very careful scrutiny. There is in addition, as has been suggested, the need for regional and district development councils to undertake once more such pre-war functions as the supply of local information to industrialists, the organisation of local supplies of capital for small new businesses unsuited to the terms of the Industrial and Commercial Finance Corporation, or the nursing of these business through their early stages. Here again there is a need both for a drastic overhaul of existing organisations—the position in Wales is perhaps the outstanding

¹ M. P. Fogarty: *Plan Your Own Industries*.

example—and for the stimulation of bodies of this kind in the wide areas of the Midlands and South where they do not exist, or exist only sporadically or in skeleton form. And the reform of local government itself and the improvement of regional planning machinery would not be wholly irrelevant.

All this reviewing and creation of organisation will of course take time, and it is clear that stage (1), though it may be possible to start it now and even, perhaps, to complete it in an area such as the Northern Region, will have to be spread over several years. At a guess, 1955 might perhaps be named as a target date.

A similar amount of time looks like being needed for stage (2). The need for a change here is still a matter for argument, and, even if the argument in favour is accepted, it is clear that it will take several years to effect a transition from the present system. It is necessary first to dispose of the Development Area problem, since until the danger of acute depression in these areas is past public opinion is unlikely to tolerate any change of machinery which has even the appearance of reducing the pressure to get firms into them. This, on the Board of Trade's reckoning, means waiting at least till 1949 or late in 1948: it may well take longer. Secondly, it is necessary to wait till enterprise is no longer at a discount—till, that is, it can rightly become public policy to allow a bias in favour of it—and until the system of sponsoring and the need for a small firm to rely on a friend at court ceases. In other words, until the worst pressure of inflation is past and the free market is working reasonably smoothly—outside, perhaps, a few special sectors. When that date will be depends on Government policy even more than on material and man-power shortages, and particularly on whether and when inflation is taken seriously in hand; but it would certainly be rash to assume a date before the early 'fifties. And thirdly, it is necessary to wait till the new town planning machinery is well run in—till staffs are collected and have gathered experience, development plans are completed, and smooth working arrangements have been built up between the new planning authorities and the appropriate Government departments.

The whole basis of the reforms suggested is, after all, the assumption that local authority staffs are competent and that a tight though smooth-working control is kept over their activities (as apart, by contrast with the present system, from the activities of the individual business man) by the departments ; and it is no reflection on either authorities or departments to say that it will take time to build up their staffing and working arrangements to the required standard. The earliest date for completion would presumably be 1951, when the initial three-year period during which local authorities are bound to prepare their development plans will run out. But, allowing for possible delays and for the other difficulties to be faced, it would once again be rash to assume that the ground will have been prepared much before 1955.

Finally, the difficulty in the way of tackling stage (3)—the revision of the new development charge procedure—is political ; and here it will clearly take at least until the middle 'fifties for enough experience to accumulate to convince Ministers of the mistake made under the Bill of 1947.

So the conclusion appears to be that, whichever stage is considered, it looks like taking seven or eight years to transfer to the new system ; and the right practical policy is evidently to bring the new scheme into operation step by step, at a pace varying according to circumstances in different parts of the country, by a date around 1955. And it must be admitted that a real effort will be needed to bring it in even by that date ; for, quite apart from political difficulties, the business of getting the new planning machinery working and building up the institutions in which local initiative would be embodied will not be simple.

VI

Is the effort worth it ? The present machinery works : is it really worth making a special effort to substitute something else ? That is the natural reaction of the administrator, who will after all have to cope with a large part of the task of creating the new machinery and of substituting local, partly voluntary, and in any case untidy agencies for the neat

efficiency of national Government departments. The answer lies partly in the fact that much of the change is in any case inevitable, including particularly most of what has been classed under stage (1) and the building up of a planning system under stage (2); and partly in the list of advantages already quoted. There is the gain to the business man from the reform of the development charge system: the decentralisation of finance and cutting out of red tape in the case of the estate companies and similar matters: and secondarily from the reform of the planning machinery itself. And there is the advantage to good government, even more from the change of emphasis in the planning machinery than from financial simplification. The thrusting of responsibility on local agencies, the mobilisation of help from local interests, and the resulting stimulus to public discussion would in themselves be worth a great deal of effort to attain.

The effort would, after all, be spread over a number of years, with no question of a sudden dislocation of the existing machinery; and, on balance, there is not much doubt that it would be well worth while. The liberal economy admittedly need to be worked for; and a study of location policy throws a good deal of light on the very genuine obstacles—including, not least, the best intentions of administrators—likely to arise in demobilising other controls as well. But, given the will, they offer in this case the prospect of substantial political as well as economic gains. The fundamental error in recent thinking about location has been to assume that, since weak machinery under largely local or voluntary control failed to produce enough results before the war in a world of unemployment and defective local planning machinery, the right policy is to provide stronger and stronger and more and more controls in the hands of the Government. The true answer is to overhaul the local machinery and to provide more and more demand for goods and services; for, given general full—though not over-full—employment and negative control through local development plans on the lines possible under the Town and Country Planning Act, something not so very unlike the pre-war machinery should work well once the

worst of the present emergency is over. The present, only partly inevitable, excess of demand for goods and services entails an excess of controls in location policy as everywhere else, while the former deficiency of demand tended to kill the tendency to self-adjustment: and the defects of town and country planning machinery have made indirect control impossible. Is it too much to hope that a few years hence these obstacles to a better system will be a matter of history?

M. P. FOGARTY

Professor Carr: A Commentary

Professor E. H. Carr long ago proved himself an effective challenger of old-fashioned liberal convictions. During the late war, however, he acquired convictions of his own, and now devotes himself to countering the liberal's doubts. It is possible to trace the route he has travelled by analysing his three most recent works of substance,¹ and I have tried to do this below.

There can be no denying the striking difference of flavour between the first of these and the later books. *Twenty Years' Crisis* deals with international relations, a subject on which Professor Carr is an acknowledged expert. Its flavour is toughly realistic. It quotes Francis Bacon on the evils of making imaginary laws for imaginary commonwealths. The tone is sceptical, and the conclusions conservative; institutions must grow, can only within narrow limits be made. The two more recent books cover a wider field with parts of which Professor Carr is clearly much less well-acquainted, including political and economic issues internal to states. They are not such scholarly works. But what is more interesting about them is their positive note of belief. *Conditions of Peace*, in particular, moralises, exhorts and talks of revolutionary change; and though Professor Carr thinks, or thought in 1942, that we still await the necessary "great prophet or leader" (p. 112), he does his best to give us an interim blueprint of Utopia. The final statement of the new creed is reserved for *The Soviet Impact*.

The change of flavour is accompanied by a shift of emphasis from political to economic questions, well-illustrated by Chapter 7 of *Conditions of Peace*. This covers the same international field as his earlier book; and retains traces of political caution. The international political community must still be allowed to develop through a network of practical relationships and private accommodations of power. "To begin . . . with constitutional structures is to begin at the

¹ *The Twenty Years' Crisis* (1940), *The Conditions of Peace* (1942) and *The Soviet Impact on the Western World* (1946).

wrong end" (p. 166). But Professor Carr now lays much more stress on economic collaboration, which is not to take the form of the cautious negotiation of peaceful change by direct contacts between interested parties, but of large scale operations by a European Planning Commission. Political haggling must be postponed, subserve the impartial brain of the economic expert.

In this matter, of course, Professor Carr's hopes have been largely frustrated.¹ But they indicate a significant habit of mind in his later writing. On the plane of politics, he has retreated into a still more radical scepticism than was evinced in *Twenty Years Crisis*—no real consensus is possible, there is only conflict and the struggle for power. But social and economic goods have now been discovered about which "the people" agree, whose achievement waits on the abandonment by the western world of its political shibboleths. The sceptic now stands shoulder-to-shoulder with the utopian. One Professor Carr mocks at President Wilson for thinking that political questions could be settled "by dispassionate scientists . . . who had made studies of the problems involved."² The other tells us that "a decision on economic policy conducive to the good of the community as a whole is . . . more likely to emanate from a committee of civil servants than from a representative assembly dominated by economic vested interests."³ The realist frowned on Wilson's notion of

¹ They were, it should be stated, shared at the time by many other international experts who tried to forecast the lines that post-war reconstruction should follow. Sir Harold Butler, in *The Lost Peace*, having stated that (p. 198) "whereas their political ideas have always kept nations apart, they are united . . . in a common desire for social advance," thought that "a transitional period devoted mainly to social and economic reconstruction might profitably precede the final political settlement" (p. 209). A western and eastern "bloc" in Europe were suggested as an interim political measure to ensure peace! It should be added that in a (1945) essay on "Nationalism and After," Professor Carr is more doubtful about international economic planning. He sees that political issues are likely to dominate and these now appear to him insoluble. In 1939 "I still believed in the possibility of achieving a community of nations : it now seems to me clear that this belief must be abandoned" (p. 42 note).

² *Twenty Years' Crisis*, p. 24.

³ *Conditions of Peace*, p. 156.

appealing directly to the people for political support for the League, over the heads of their rulers. The utopian prefers to regard international economic planners "as representing . . . not so much the governments or the nations or even the peoples, but simply the people, of Europe."¹

The new approach is carried over into the internal problems of modern society. The working political structures of states become more and more for Professor Carr sham facades distracting us from the true goals of the people. Representative assemblies have still a limited rôle in *Conditions of Peace*, though "the best that Parliament can do is to confine itself to a somewhat vague pronouncement of its intentions, and then give wide powers to the executive to carry this intention into effect" (p. 155). In *The Soviet Impact*, the political problem has been analysed away completely; the question: Who will plan the planners? becomes "no more than a smart debating point" (p. 47). The social reformer gains correspondingly in assurance, is more and more convinced that any number of social ends can be devised in advance by some spontaneous act of the collectivity. But let us look more closely at what has happened.

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Twenty Years' Crisis is a sustained attack on utopian political thinking, which ignores actual human behaviour or makes artificial assumptions about it. The utopian seeks an ideal justice, the notion of compromising with power offends him, and so he has a tendency to ignore the problem of power altogether. At the same time he wants quick results, neglects those slower processes of adjustment which constitute genuine progress, so may tend to become himself a power-seeker. These are both important strands of Professor Carr's argument. Supporters of the League, he says, were never sure which horse to back; whether, in the realm of "international public opinion," a universal support for their ideal ends already existed, and it was simply a question of devising institutions to

¹ *Conditions of Peace*, p. 271.

give expression to the underlying harmony ; or whether one had rather to create harmony overnight by closing the gaps in the structure of a superstate. On the whole, the former tendency prevailed. Consequently the League normally lacked the strength to impose its standards. But the standards were in any case illusory, not correspondent with the actual feelings of the people of one state with regard to those of another ; and by continually invoking them, the League did manage to hinder the development of habits of peaceful *ad hoc* negotiation, based on "a certain measure of common feeling as to what is just and reasonable" in the given case.

I do not wish to dwell at length on Professor Carr's views on the pre-war international situation. But they have been worth stating in broad outline because of the light they cast on his general theory of society at the time when he wrote *Twenty Years' Crisis*. This may fairly be called conservative. The moral purposes of men and their "common feelings" do enter into politics but in a perpetual series of compromises with power. The organised machinery of the State itself must be based partly on power, which will always in history be partially wielded and carry with it the possibility of abuse. But at the same time a community can only survive and develop normally if it is also built on and allows scope for the changing personal contacts and bargainings, based on private spheres of power, of its members. It is the development through such contacts of "a certain measure of common feeling" which may make it finally possible to speak of some standards that the society as a whole accepts.

Something like this seems to be Professor Carr's central position. It does not ignore the problem of power, delude itself into believing that a natural harmony prevails, or could easily be made to prevail ; nor is it obsessed by power to the extent of believing that all progress is frustrated by the survival of private spheres of interest, and that a clearly formulable set of social ends awaits a *deus ex machina* before it can be put into practice. This is the central position, but it is already a precariously held one. For the illusion that Professor Carr is clearly most anxious to counter is that of a

"natural harmony,"¹ and he discusses only the crudest versions of the doctrine, dwelling almost entirely on their failure to give an adequate place to conflict in human relations, and ignoring the contribution of the subtler theorists of this school to his own belief in the historical processes of human adjustment by which a community grows. At the same time the other strand of his argument is weakened by a tendency for Professor Carr himself to become obsessed by power. The League is always for him either the feeble debating ground of wishful thinkers, or a flimsy screen behind which the Haves operated. It seems possible that at times it was neither; and the either—or becomes even less plausible when we see it applied in Professor Carr's later books to the democratic Parliaments of the west.

In general, however, such preoccupation with power as exists in *Twenty Years' Crisis* inclines Professor Carr in the direction of caution. It is the private spheres of the national units in a poorly developed international community that have to be acknowledged and made use of, and not ignored in the rush for quick results. Such a preoccupation only becomes disastrous when he turns to the internal problems of states, where power is already firmly established at the centre, and it is the private spheres of interest that show signs of anaemia. Then it may easily lead one to abandon caution, and to discover a whole set of "common feelings," social purposes framed in advance which only require unconditioned authority to be speedily realised.

It is such a set of collective ends that Professor Carr now thinks he has found in the social and economic spheres. In his later works he deserts almost wholly the view that social purposes can only be worked out by free interchange within a group where private powers are not completely sterilised. Private give-and-take becomes the innocuous "self-criticism"

¹ Professor Hayek, on the other hand, is more intent on disposing of the view that collective ends can be rationally formulated in advance; and is inclined to minimise the problem of how one creates a public power able impartially to "regulate" private spheres of responsibility without at any point overstepping the line he sets for it.

and "participation of the masses in administration" of a State in which authority has determined in advance the goals of human endeavour.

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Conditions of Peace (published in 1942) bears the mark of its period—of the premature phase of enthusiasm for Reconstruction that one associates with the name of Mr. Priestley. Perhaps it is unfair to resurrect now an unworthy successor to the brilliant *Twenty Years' Crisis*.

The tone of the book is set very early, and shows us Professor Carr in a new light. "We need a policy which is both positive and revolutionary" (p. 6). What is to be the watchword? Not democracy,¹ even in 1914 "no longer adequate to meet the new revolutionary crisis"; but "larger units under centralised planning and control." Nazi Germany, the disgruntled Have-not of 1939, has become (with the U.S.S.R.) the harbinger of profound changes in society that the backward western democracies have not yet recognised.

What are these changes? The masses have emerged, to whom the liberal theory of the state as the protector of private rights and liberties does not appeal. At the same time, private economic power has ceased to be content with its own sphere, and also seeks to use the State more positively to its own advantage. The expansion of State functions creates in its turn a bureaucracy which renders democratic participation through the vote "a hollow fiction." Yet such an expansion to meet the social and economic needs of a mass-society is inevitable. But we need not worry. The sham of political democracy can be replaced by other forms of mass-participation in public work. Liberty may similarly be redefined as "maximum social and economic opportunity" (p. 30).

¹ However, Professor Carr discovers in the course of his book that the word can be given an entirely new and up-to-date meaning. Indeed, by the time it was published Stalin had declared for "independence and democratic liberty." In the *Soviet Impact*, Professor Carr appears vaguely critical of the Atlantic Charter for failing to mention the word, and attributes its occurrence in the Potsdam text to "Soviet inspiration."

Professor Carr proceeds to redefine some of the concepts he used in his earlier book. The doctrine of the Harmony of Interests is now criticised from a different angle. It is no longer the sublime illusion on which utopians have fed, but a sordid contrivance that "dispensed with the need for a moral purpose to direct . . . planning" (p. 103). The old antidote had been a recognition of the existence of conflict, leading to a cautious and realistic effort to bring about peaceful adjustments without paying too much attention to premature and abstract formulations of political justice. The new antidote too recognises the conflict of interests, but only to state an overriding claim for the presumed interpretation set on social justice by a presumed "people." Social objectives can now cheerfully be formulated in advance. The adjustments of private power are suspect, even when operating through a free Parliament. A preference is stated for government by a "relatively disinterested" civil service, backed by an executive chief and assisted by public opinion polls, which though they "could never be adopted as the official test of the popular will," are "in many ways more reliable and accurate than the parliamentary machine" (p. 138). Parliament should be disintegrated into committees which would facilitate an intimate relationship with the civil service and "help to avoid the grave inconvenience of frequent public debates on such matters as foreign and defence policy."¹ "The determining factor in making democracy real and effective is not to multiply the number of direct channels through which popular authority flows, but to create among the maximum number of people a lively sense that they, and people like them, are administrators as well as administered and that the conduct of government is part of their business and their responsibility" (p. 162).

I detect in this last quotation from Professor Carr the note of much recent writing, the view that an activity can be said to embody a social decision provided that a sufficient number of persons are induced to believe that this is the case. A similar

¹ I cannot, incidentally, help wishing that Professor Carr had cast his eye on the standing committees of the American Congress (or on the French "commissions") and enquired whether their official intimacies conduce to a streamlined executive freed from the pressure of particular interests.

line was taken by Sir Oliver Franks in his recent lectures on "Central Planning and Control," when he suggested that economic market-forces (which at least express real preferences even though the resultant may sometimes be unsatisfactory) might be replaced by an elaborate network of mutual uplift. The possibility that in fact resources would not be rationally disposed by this means was not so much denied as disregarded—a "lively sense" that a plan exists becomes almost a substitute for a plan.

It is of course true, even tautological, that no cheat exists so long as no-one feels cheated, both of economic and political satisfactions. But even if a cosy niche in the common effort can be provided for all of us, from which we would not wish to stir, all such theories must at least assume some aboriginal decision to agree on so-called "fundamentals"—the major social objectives; or, if some are so temerarious as to say they do not agree, there must be some impartial body of popular standard-bearers to whom application can be made for a final ruling. I believe that in no society are either of these conditions satisfied, at least not in any sense that is helpful to Professor Carr.

Terms like social justice and liberty are not meaningless—far from it. But they do not present us with any ready-made programme, even in the broadest sense. It is tempting to assume that they represent simply a more generalised way of talking about what could be more particularly expressed in terms of so much coal next year, or the enactment of *Habeas Corpus*. I am not quite sure how they operate on us and guide us, but certain that it is not in this way. It is also true that a community exists on the basis of some "general agreement to agree." But in what this agreement consists it is rather difficult to decide. It would at any rate be nearer the truth to say that it consists more in a common acceptance of a framework within which decisions are taken (in the broadest sense, a constitution), than in some general version of the decisions themselves. And if this seems inadequate, I should add that it also involves a common habit

of mind about the mode in which decisions are taken, the kinds of discretion that seem acceptable, and the rules of thumb that have been found workable.

As for impartial standard-bearers, they do not exist, not even in the civil service. But a healthy society is a structure, of overlapping "powers" and subordinate communities which do represent in some degree a specialisation of function corresponding to the needs of the time. Each is, or should be, checked by others but each has also a sphere of discretionary power which can normally be relied on to defend and interpret particular considerations that have been found to be important. There *are* standard-bearers in this sense, the sense in which we can apply to a judge for "good law." In the western democracies, the economic system has hitherto formed one of the larger franchises, though it too has never been exempt from outside influences that have tried to control its discretions—unique however in one way, that following the time when it could be characterised as the sphere of a mercantile community, it achieved a special freedom on the (sometimes false) assumption that it was very largely self-checking.

The above unoriginal theory of a "healthy" society is no doubt a myth—perhaps it ranks as one of Karl Mannheim's Ideologies, and reflects a smug English disinterest in change or the need for change. A society in which all private spheres of responsibility and power were as nicely integrated into a structure of mutual checks as all that, would indeed be quite dead. Living power tends to corrupt, one private interest invades a second, and the public authority that checks it conceals a third. A free market produces millionaires who buy power to distort its operations. There is a "wild" element in a liberal society. Yet it manages to survive and develop, even embody certain values that one respects and does not find elsewhere.

.

Even when his exposition of an alternative myth (in *The Soviet Impact*) is in full flood, Professor Carr at times turns and shifts uneasily. On pp. 13-16 he is expounding the Soviet view of democracy. "Soviet writers assert . . . that Britain and the United States are not truly democratic because they tolerate opinions hostile to democracy." From the succeeding paragraphs, no-one would gather that the Soviet view was not also Professor Carr's view. Then suddenly we learn that "a strong and closely knit society" like Great Britain "*can* afford to tolerate" diversities that might—"prove fatal altogether to democracy in Rumania and Yugoslavia." "Strong and closely knit"—surely that is not the Soviet view. Nor is it clear from his analysis of the origins of English democracy why it should be Professor Carr's.

These origins he traces to the "revolt of the nascent bourgeoisie" in the 17th century, which produced the characteristically Anglo-Saxon Lockean view of the state as "a sort of wall or fence within which individuals, guided by their own lights, conducted the essential processes of social life." Hence "the right to dissent . . . is the essence of English democracy." Hence "the feeling . . . that democratic government means weak government." It was at this point perhaps that Professor Carr remembered that unguarded reference to a "strong and well-knit society" and felt that something had gone wrong with his intellectual pedigree. He adds therefore that this "feeling . . . that democratic government means weak government" is "*rarely formulated but always latent in American if not in English politics*" (my italics).

So the Americans only, and not ourselves, are the heirs of Locke ; or it may be that there is a more positive content even to Locke than Professor Carr has chosen to see. He has been so fascinated by the abstract discussion of political ideas that he has not done justice to one important side of the English tradition of government—its emphasis on the development of sound and workable political habits and of respected institutions within which an almost domestic interchange and discussion takes place. If one is talking of Locke, it is worthwhile remembering his account of the legislature in which

"the members of a commonwealth are united and combined together into one coherent living body. This is the soul that gives form, life and unity to the Commonwealth ; from hence the several members have their mutual influence, sympathy and connexion" (Second Treatise, XIX). Such insights into the nature of political practice are a valuable part of the English political tradition. As Professor Carr himself points out, political democracy as an abstract doctrine was not very readily accepted at all in England, and we were still arguing cautiously about it when the European left started to abandon it as a sham. One of the reasons why the doctrine, in its Anglo-Saxon form, has so often been stated negatively, in terms of non-interference with rights or of ignorance about what is good for other people, is precisely that it has been accompanied by this sense of a sound political habit, as a practical stabiliser.

Professor Carr might accept in part this correction of his emphases, without which his reference to a "strong and well-knit society" makes no sense. But he undoubtedly thinks that the English political tradition has very little to offer most societies that have developed outside it. These have failed in their history to find a mean between despotism and anarchy. Professor Carr seems to have decided that, in general, there is no mean. "Government is a process by which some people exercise compulsion over others. This is as true of democracy as of other forms of government, the criteria are by whom, by what means, and for what, the compulsion is exercised" (p. 11). This is stated as the Soviet view, but Professor Carr gives no sign that it is not also his own.¹ Democracy becomes simply a way of locating absolute power and harnessing it to desirable ends. In its early stages this view led political theorists to invent a figmentary "people" as the source of political authority, and to imagine that the business of government

¹ The Soviet view as exhibited by Professor Carr leaves no room for the Marxist promise that at some future date the State will "wither away." To judge from the account given in this book, Soviet theory owes more to Hobbes and Hegel than to Marx. The criterion of the "means," it is made clear elsewhere, constitutes no moral limitation on unconditioned power seeking to fulfil social ends, but simply allows for the participation of the masses in administration of a predetermined policy.

was first and foremost to extract a fair sample of their desires at the polling-booths (no-one had yet thought of the public opinion poll). Professor Carr himself explains how this broke down, how political equality in this sense failed to satisfy the believers in more radical forms of equality. The results of popular elections appeared to pervert the presumed popular will. One can try to set things right by "multiplying the number of direct channels through which popular authority flows" or alternatively by confining the voice of the people's representatives to the broadest directives (the path Professor Carr has trodden in *Conditions of Peace*). But ultimately one is forced into the confession that democracy, in this sense, is a sham. One begins to look round for standard-bearers of the people, in default of the people themselves. Hitler is a relatively straightforward answer. But the Soviet Union, drawing in part on the long Russian tradition of exalting the role of the community, has discovered (in Professor Carr's view) a much better solution, though it is quite impossible to say from his analysis what it is. We get no nearer to it than that "society has the right and the obligation to decide by a collective act what is good for the society as a whole and to make that action binding on the individual" (p. 46). Nowhere are we told in what this "collective act" consists except that at some point an executive emerges whose activities we are expressly forbidden to question. Nor do we hear very much about what the new social values are, save in terms of the old categories of liberty, equality, fraternity. Professor Carr elsewhere agrees that such values "remain abstract and formal until we are able to place them in a concrete setting." We remember, of course, "larger units under centralised planning and control" from his earlier book. And, oh yes! There are some new values on p. 102, "similarity and standardisation" and (p. 103) "conditioning."

Professor Carr doesn't really like this prospect any better than you or I. It is not, as he temperately remarks, "pure gain"—only inevitable. But if it is only inevitable, perhaps it can be avoided.

R. N. SPANN.

A Note on the Visual Representation of National Income Statistics

I.

The purpose of this note is to outline a method for the presentation of some aspects of national income theory, which will also serve to illustrate actual statistics, and provide a framework for the disciplined discussion of problems of overall economic planning, and its relation with budgetary policy. The improved exposition of existing ideas is aimed at, rather than the development of new ones.

The first step is to show the composition of the resources available in the area during the accounting period. These consist of the net national income, plus net imports (*i.e.* the excess of imports over exports) or minus net exports. These can be represented by a rectangle as in figure 1,¹ where column A (i) shows the resources available with an import surplus, and A (ii) those available with an export surplus. For the remainder of this note, column A (i) above will be used, but in all cases, A (ii) could be substituted without altering the argument. Further refinement could be added to column A by showing the composition of the net national income in greater detail, but this is not essential to the present note.

The next stage is to show how the available resources are used, which is done in figure 2. More detail, again, could be given in column B, the division of investment into its public and private components being the most obvious.

A similar treatment of money incomes is given in columns C, D and E of figure 3. The right hand column, E, shows the components of money income, which are real income (*i.e.* net national income) plus transfer payments from the public to the

¹ This method of presentation was suggested by Mr. Kaleckis' diagram on p. 41 of the Oxford Institute of Statistics' *The Economics of Full Employment*.

private sector.¹ Column D shows how this income is held. Transfer income, naturally, is private, so is all the real income except that portion earned by the public sector from commercial activities. Column C shows how this income is disposed of. Private incomes are used for taxation, consumption and saving. The public revenue consists of public real income plus taxation. For some purposes, savings might well be subdivided into those lent to business, and those held in government securities or money.

Figure 3 shows the source and disposal of the national income in its real and its money aspects. For the economic system to be in equilibrium, the disposal of resources and of money incomes must be in equilibrium. The only common item in the disposal columns (B and C) is private consumption. The only one in the original columns (A and E) is the net national income. The balancing equation is

$$\begin{array}{rcl}
 \text{public consumption} & = & \text{taxation} \\
 + \text{transfer outlay} & & + \text{public real income} \\
 + \text{investment} & & + \text{private savings} \\
 & & + \text{net imports} \\
 & & \quad \text{(— net exports).}
 \end{array}$$

So long as this equation balances, income—generating activities equal income—consuming activities. When the budget balances on current account,

$$\begin{array}{rcl}
 \text{public expenditure} & = & \text{public income} \\
 \therefore \text{public consumption} & = & \text{taxation} \\
 + \text{transfer outlay} & & + \text{public real income.}
 \end{array}$$

The equilibrium equation is then

$$\begin{array}{rcl}
 \text{investment} & = & \text{private saving} \\
 & & + \text{net imports} \\
 & & \quad \text{(— net exports).}
 \end{array}$$

¹ When applying this method of exposition to published statistics, this pure treatment of transfer incomes may be impossible, and some transfers between public departments may be included in transfer incomes. No diagram can be more accurate than the statistics it is illustrating. (See Appendix).

When there is a budget surplus,

$$\begin{aligned} & \text{public expenditure} + \text{surplus} = \text{public income} \\ \therefore & \text{public consumption} = \text{taxation} \\ & + \text{transfer outlay} \quad \quad \quad + \text{public real income} \\ & + \text{surplus.} \end{aligned}$$

The equilibrium equation is now

$$\begin{aligned} \text{investment} & = \text{private savings} \\ & + \text{net imports} \\ & \quad (- \text{net exports}) \\ & + \text{surplus.} \end{aligned}$$

Similarly, with a budget deficit, the equilibrium equation is

$$\begin{aligned} \text{investment} & = \text{private savings} \\ & + \text{net imports} \\ & \quad (- \text{net exports}) \\ & - \text{deficit.} \end{aligned}$$

In other words, when there is a budget surplus, investment can outrun savings and foreign borrowing by the amount of that surplus, without causing the danger of inflation. When there is a deficit, investment must be reduced below savings and foreign borrowing, since these will be needed, to the extent of the deficit, to stem off inflation.

If it was desired to show a budget surplus in figure 3, it could be done by shading the taxation block in column C, by an amount representing the surplus. Taxation would thus be divided between that used to meet current expenses, and that required to accumulate the surplus. A deficit could most conveniently be shown in column B, by shading that part of public expenditure not covered by revenue.¹

II.

Figure 4 shows the sources and disposal of British national income for 1946. Figures are taken or calculated from *National Income and Expenditure of the United Kingdom, 1938 to 1946* (Cmd. 7099), and are given in millions of pounds. From column D, it will be seen that public income is partly transfer income, partly real income. This is because transfer

¹ Cf. Kalecki. *op. cit.*

incomes include some incomes accruing to public bodies through their holding of government securities. This is dealt with in the appendix. Public income may seem insufficiently important to be treated as a separate item now, but it must be remembered that it could easily become a major source of revenue in a socialist economy.

The balancing equation for figure 4 is

public consumption (2,261)	=	taxation	(3,040)
+ transfer outlay (1,267)		+ public income	(60)
+ investment (693)		+ private savings	(721)
		+ net imports	(400)

Of savings and foreign borrowing totalling £1,121 millions, £693 millions went to investment, and the remainder to meet the budgetary deficit.

This exercise shows that the five-column diagrammatic method can be used for the representation of statistics, as well as for the demonstration of theory.

III.

The two left-hand columns of figure 3 are based on the fundamental economic concepts, net national income and the foreign balance, on which all decisions about the planned allocation of resources must be based. The three right-hand columns are based on the fundamental concepts, net national income and transfer income, on which all budgetary systems must be based, since they make up money incomes. This method of exposition therefore provides a framework for the co-ordination of economic planning with fiscal policy. An overall economic plan can be based on real resources alone, but if fiscal planning is to be in harmony with it, transfer incomes cannot be ignored.

Figure 5 provides an example of a problem of this nature. Columns A and B represent the plan put forward in the

Economic Survey for 1947 (Cmd. 7046). All figures are percentages of the net national income. These estimates do not, however, contain sufficient data for the formulation of a budgetary policy such as to maintain equilibrium. This deficiency has been made good in column E, where transfer incomes have been estimated at 16 per cent. This is an arbitrary figure, based on the assumption that this proportion will be the same in 1947 as it was in 1946. No better estimate is available, and the order of magnitude is likely to be substantially correct. Public income in column D is estimated on the same arbitrary basis.

The balancing equation here is

$$\begin{array}{rcl} \text{public expenditure}^1 & (24\frac{1}{2}) & = \text{(taxation + savings)} \quad (48\frac{1}{2}) \\ + \text{transfer outlay} & (16) & + \text{government income} \quad (1) \\ + \text{net investment} & (13) & + \text{net imports} \quad (4) \end{array}$$

Taxation and savings are expressed as a percentage of net national income, which is not the relevant concept for judging the burden they represent. They come from private incomes, of which they are $\frac{48\frac{1}{2}}{115} \times 100\% = 42\%$.

The fiscal problem set by this plan is therefore to ensure that only 58 per cent. of private incomes are spent on goods and services (net of indirect taxes). The balancing or otherwise of the budget changes the details of the problem, by affecting the relative sizes of taxation and savings, but the scope of taxes and savings together remains the same.

It may be of interest to compare the fiscal target set by the 1947 plan with figures attained in previous years. The table below shows the sum of private savings and tax liabilities on private incomes for the years 1938-46.

¹ "Public expenditure" is here used, as in Cmd. 7046, to denote expenditure on real resources. It thus differs from the use in section 1 of this note, where it indicated expenditure in money terms for any purpose. It approximates here to "public consumption," but the terminology of the *Economic Survey* is too vague to rule out the possibility that it might include some public investment also.

TABLE I.

Private savings + tax liabilities as a percentage of private incomes. ¹	
1938	29
39	34
40	43
41	52
42	53
43	54
44	52
45	47
46	40

¹ Cmd. 7099. Tables 11 and 12.

The plan is thus seen to call for less savings and taxation than during the war years, but for more than previous years of peace. It involves less spending out of private incomes than even in 1946. It is not altogether surprising that this plan was abandoned so soon after it was promulgated. The planning of physical resources cannot be carried out in isolation from that planning of monetary resources which has been embodied in British budgeting for centuries.

R. J. LOOSMORE.

APPENDIX.

THE METHOD OF CALCULATING COLUMNS C, D AND E OF FIGURE 4.

References in brackets below are to Cmd. 7099. Except where otherwise stated, figures refer to the items of the main tables.

In column E, real income = "national income" (6). Transfer income is calculated as the sum of social security payments (18), miscellaneous transfer incomes (19) and national debt interest (43). The total of real and transfer incomes exceeds total private income (37) by public income from property (42).

Column D was difficult to divide, owing to the composition of public income from property. This consists partly of rents and profits (Appendix II items 19 and 55), partly of interest on investments held by national insurance funds, mainly national debt interest (Appendix II item 44), and partly of a miscellaneous item (Appendix II item 20) which includes some investment income. Thus, it is not possible to state how much of this £60 millions is real, and how much transfer, income. Neither is it possible to calculate how much of total private income (37) consists of real income, since the item "rent, interest, and profits" (15) includes national debt interest. It is calculated from a gross total of all profits, rent, and interest, from which one of the items deducted is public authorities' profits, interest and rent. (page 27 note 15). Clearly, to assume that all the public income was real income would be wrong. Equally, to assume that it all consisted of transfer income would be wrong. The assumption actually made for figure 5, is that public income is equally divided between real and transfer income. This estimate claims to be no more than an intelligent guess, likely to be more accurate than either of the extreme assumptions.

Fortunately, any inaccuracy in column D will not affect column C, since public income is disposed of in the same way whatever its source, as are private incomes. The balancing

equation will not be affected, since transfer payments to a public department appear on both sides, under transfer outlay and under public income.

FIGURE 1

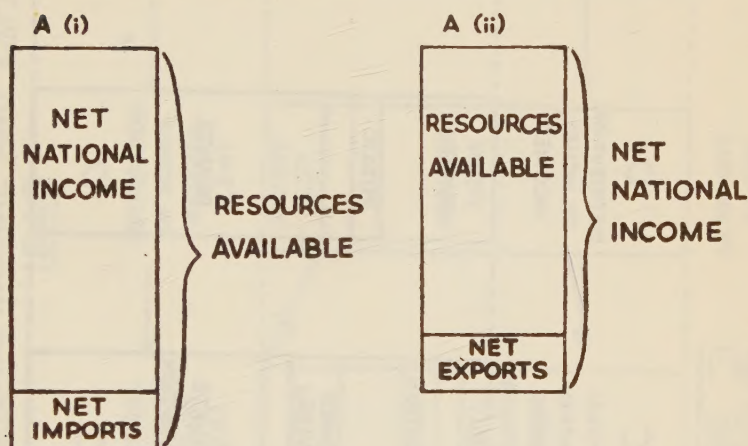


FIGURE 2

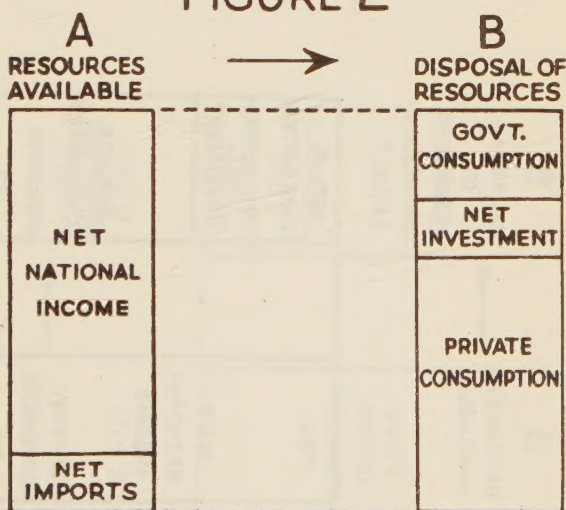


FIGURE 3

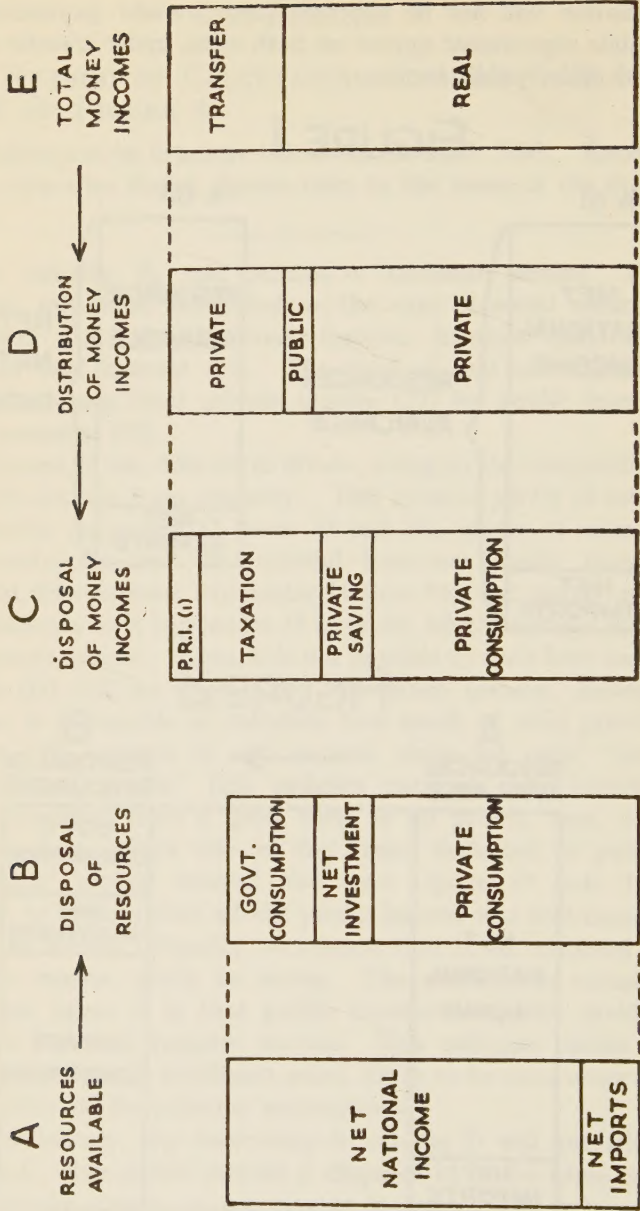


FIGURE 4

BRITISH NATIONAL INCOME AND EXPENDITURE

1946

UNITS - MILLIONS OF POUNDS

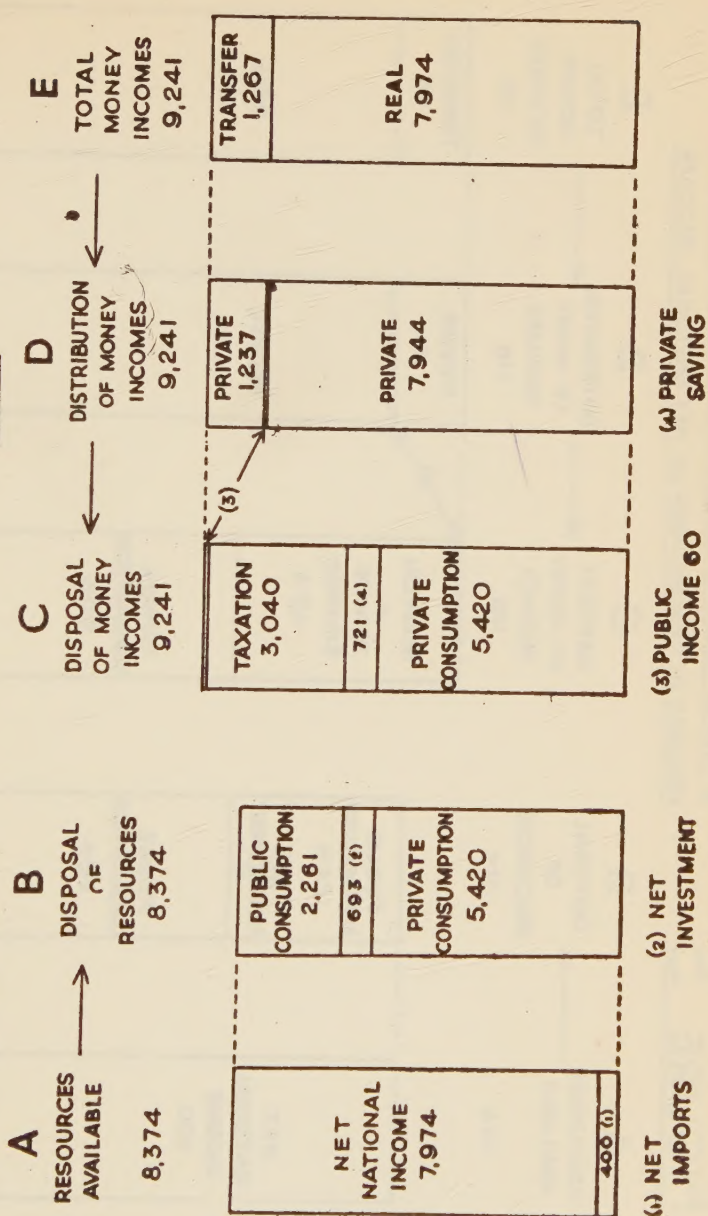


FIGURE 5

A HYPOTHETICAL LAYOUT OF NATIONAL INCOME
FIGURES IN PERCENTAGES OF NET NATIONAL INCOME

